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THE SYNTAX OF THE VERB
IN
CEYLON TAMIL

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by

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ABSTRACT

The present work analyses verbal syntax in Ceylon Tamil. The model it uses for the purpose is the transformational model. Allowing for the fact that it is particularly concerned with the verb, it seeks to generate all and only the sentences of Ceylon Tamil. It carries out the task in three parts, the first two of which deal with the base structure of the language, and the third, with its surface structure. The first part, the categorial sub-component, contains the phrase structure rules which explicitly characterise a restricted set of elementary structures (grammatical formatives, their functions, relations, and order). This sub-component generates pre-terminal strings consisting of grammatical formatives and complex symbols, the latter being sets of specified features into which the symbols representing lexical categories are analysed.

The lexicon, the second part of the grammar, consists of an unordered list of entries of verbs, each of which is made up of a pair, the first member of which is a phonological "spelling" of the item concerned, and the second, a complex symbol, a set of specified features. These lexical entries are substituted for the complex symbols in the pre-terminal strings in accordance with a lexical rule which will be stated in the main body of the work. This procedure has the effect of

converting the pre-terminal strings into terminal strings.

The terminal strings contain the elementary content elements from which the semantic interpretations of actual sentences are constructed. They do not, however, constitute the full range of sentences of the language, which will be produced only when the deep structures generated by the first two parts of the work are mapped by the transformational rules of the third part into surface structures.

To

INDRANEE

'sine qua non'

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A few inadequate words to acknowledge some very great debts:

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"The system must be followed where it leads."

C.E. Bazell, "The Fundamental Syntactic Relations"

"All the problems confronting the analyst may be represented as problems of asymmetry, of non-correspondence. Linguists seek to assimilate one level to another, and do this in several ways, by the exclusion from their systems of one or the other asymmetry."

C.E. Bazell, "Linguistic Typology"

SYMBOLS AND CONVENTIONS

X $\rightarrow$ Y	X is rewritten as Y.
X $\not\rightarrow$ Y	X is not rewritten as Y.
X $\Rightarrow$ Y	X is transformed into Y.
X $\not\Rightarrow$ Y	X is not transformed into Y.
X $\leftarrow$ Y	X is developed from Y by means of a Phrase Structure rule.
X $\not\leftarrow$ Y	X is not developed from Y by means of a Phrase Structure rule.
X $\Leftarrow$ Y	X is developed from Y by means of a Transformational rule.
X $\not\Leftarrow$ Y	X is not developed from Y by means of a Transformational rule.
X - Y	X and Y are concatenated (confined to the Transformational rules and the Lexicon).
X ^ Y	(In the Phrase Structure rules) X and Y are concatenated. (In the Transformational rules and the Lexicon) X and Y concatenated are set apart as a unit from other items they may occur with in a string.

$\underline{X \hat{} Y \hat{} Z}_a$	X, Y and Z concatenated form a single unit labelled a.
$X \hat{} Y \hat{} Z^{a}$	X, Y and Z concatenated form a single unit to the whole of which a applies.
$X - Y - Z^{a}$	
X / Y	X is a Y.
$X \not/ Y$	X is not a Y.
$X \subset Y$	X contains Y.
$X \not\subset Y$	X does not contain Y.
$X = Y$	X is equal to Y.
$X \neq Y$	X is not equal to Y.
$^{*}X\ Y\ Z$	X Y Z is an ungrammatical string.
[[X Y Z]]	X Y Z is a literal rendering of the Tamil sentence it refers to.
[+ x, - y]	The item concerned is assigned the feature x, but not the feature y.
$X \begin{Bmatrix} Y \\ Z \end{Bmatrix}$	X is concatenated with either Y or Z.
$\begin{bmatrix} X \\ Y \end{bmatrix} \rightleftharpoons \begin{bmatrix} W \\ Z \end{bmatrix}$	X is rewritten as W, and Y as Z.

X → Y in env. W ^ ___ ^ Z	X is rewritten as Y in the environment of a preceding W and a following Z.
X (Y)	Y is optionally concatenated with X.
∅	Zero.
A,B,C,D, W,X,Y,Z.	Cover symbols for any variable ranging from null to all possible elements.

A NOTE ON THE TRANSCRIPTION

The transcription used seeks to represent the sounds of Ceylon Tamil in the most economical and unambiguous way possible. From the point of view of the written language, which provides some of the material out of which the analysis in the present work is developed, this implies that in many instances, single letters of Tamil, which on the whole represent syllables, will be transcribed in each case as a consonant followed by a vowel. Furthermore, what are two distinct items in the orthography will, in certain instances when they are not contrastive in speech, be represented by a single symbol. Thus ந and ன will be represented by n, and ற and ழ by l. The symbol y too will account for two orthographical devices, ய and ை . The latter combines with various consonants to produce letters which represent in each case a complex consisting of the consonant sound followed by a short diphthong. y will represent the final element of the diphthong.

There is one further instance when the transcription does not show a one-to-one correspondence with the orthography. This is when the complex which appears superficially to be made up of orthographical devices which would be transcribed ola (in initial position in a word) or ela (immediately following a consonant) (in fact this complex operates as a single unit in the orthography), is trans-

cribed as a short diphthong au, which combines two symbols used elsewhere for vowels.

In many cases, the precise phonetic value of a symbol used will vary very widely depending on its environment. The present work will not indicate this variation.

A special note must be made of certain Sanskrit sounds and letters which have found their way into Tamil. These items are well established within the kind of Tamil which is the object of study. At the same time they are felt to remain outside the native system. The letters representing them are c (ctaapanam, "establishment"), j (javaharlal, "Jawaharlal"), ʃ (rikʃookaaran, "rickshawman"), and h (harijan, "harijan").

I

INTRODUCTION

Tamil, which is the second largest member of the Dravidian family of languages, is used in South India, Ceylon, Malaysia, Mauritius, South Africa and Fiji. The term "Ceylon Tamil" will, in the present work, be applied to the language of only a certain section of the people who use Tamil as their native language in Ceylon. Below, an attempt will be made to indicate the precise significance of the language of this section within the linguistic set-up in Ceylon.

This will be done, firstly, with the help of figures.[1] Before proceeding, however, it is necessary to point out that the figures provided are somewhat unsatisfactory in two respects. First, they are based on the Census held in 1953, and it is to be expected that when the figures of the 1963 Census are finally released, certain changes of varying degrees of significance will have to be taken into account. Secondly, the figures of those who actually use Tamil as a native language in Ceylon are not available, and the figures below are of the racial groups the majority of whose members are known to use Tamil as their mother language. Once these factors have been provided for, it could be stated that over two million people use Tamil as their mother language

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1. The figures are taken from Table 13 on page 25 of the Statistical Abstract of Ceylon (1963), printed at the Government Press, Ceylon.

in Ceylon. The actual figures given in the Statistical Abstract of Ceylon for 1963 are as follows:

Ceylon Tamils	884,703
Indian Tamils	974,098
Ceylon Moors	463,963
Indian Moors	47,462

Of these, the last two groups include a fair number of people who do not use Tamil as their native language. These two groups are made up largely of people who had, over the centuries, moved into Ceylon primarily for the purposes of trade. The second group mentioned, the Indian Tamils, are most of them people who, during the period of British rule, were imported as cheap labour to work on the plantations run by the British. They have not quite been assimilated into the Ceylonese community and maintain a fair degree of cultural distinctiveness. In terms of an agreement reached between the Governments of India and Ceylon in 1964, more than half of them are to be repatriated to India over the next few years. The Ceylon Tamils are those who have been in Ceylon long enough to be regarded as native to the country. The Tamil they use is quite distinct from the Tamil used by any of the other groups, and it is their language the present work is concerned with.

Here, too, however, there are certain important distinctions to be made. On the one hand, there are the distinctions involved in terms such as "the Jaffna dialect" and "the Batticaloa

dialect" that are in common currency in folk linguistics. No dialectal work which merits serious consideration has so far been done in Ceylon to establish these distinctions on formal grounds.[2] A problem of a different kind is raised by the changes[3] which took place during the period of British rule in Ceylon, which began in 1796 and ended in 1948 with the granting of political independence to Ceylon. This period saw the emergence of a bilingual western-oriented middle class. Partly this was the outcome of measures taken by the British to deal with certain practical problems of administration (as well as of commerce, and so on, when these began to develop under British control). English was used exclusively in the upper levels of the administrative, commercial, and such like spheres by the British. The result of this was that where these spheres of activity touched the lives of the common people, who never learned English, there was a linguistic gap which had to be bridged by bilingual natives. The educational system, when it began to take shape, was, then, geared to the utilitarian objective of producing these bilingual natives. Soon, however, a political objective was grafted on to the utilitarian objective. The educational system was now re-

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2. Outside Ceylon, Zvelebil has shown much interest in Tamil Dialectology, producing some good pioneering work in the field. (Zvelebil (1963), (1964)). He has not, however, worked on the distinctions to be found among the various dialects used in Ceylon, and this leads him to treat Ceylon as a single dialect area.

3. Much of what is set out below is taken from d' Souza (1960).

quired to perform the additional task of "creating an influential western-oriented intelligentsia among the native population as an aid to stabilizing colonial rule."[4] This resulted in some seven or eight percent of the population becoming bilingual, using a variety of English (which may be termed "Ceylon English") exclusively in the educational, administrative and such-like spheres, and their native language exclusively in the more domestic spheres (such as, for example, in their dealings with underlings). These people can, therefore, be described as "being in possession of two 'half-languages' whose spheres of use were supplementary."[5] The important point is that each "half-language" was used exclusively in its own spheres, a fact which receives confirmation from the development of the "mixed language" spoken at one time by a fair number of people. This "mixed language", which defies analysis because it forcibly telescopes two systems together, is now, quite deservedly, ridiculed. Its explantion is, however, very clear. When in ordinary intercourse, for which Tamil was generally used, a subject was introduced which properly belonged to a sphere in which English ruled exclusively, English words, phrases and sentences were interspersed with Tamil words, phrases and sentences. Tamil was not, however, abandoned completely in such conversations, for some aspects at least of them belonged to spheres in which Tamil ruled exclusively.

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4. d' Souza (1960).
5. d' Souza (1960).

From the point of view of the Tamil language, the developments described above were of fundamental importance. The various great changes that were being introduced by the British in the spheres of administration, education, commerce, law, politics and so on were still being handled primarily in English. Tamil was indeed called upon to handle these new factors at times, but on the whole it was confined to other spheres of life, for, until much later, it was only the small bilingual group who had true access to the spheres in which the radical changes were being introduced, participating in a way that was denied to the rest of the country in bringing about and establishing the changes. Tamil, which was used by the common people, continued, therefore, to develop to a large extent out of contact with these changes. Whatever changes were occurring in Tamil, however, were not taken into consideration by the small group of pundits who took on the task of sustaining the powerful grammatical tradition that the language had had for centuries. For the exponents of this tradition the standard language had always been the language of the educated. Education, however, was now often synonymous with English education. Therefore, the pundits, who under pre-colonial conditions had been the elite among the educated, and who had had the patronage of the rulers, withdrew to the admittedly satisfying consolations of the tradition, and when exercising their ancient prerogative of determining the standard language, decided that this was the language "preserved" by the tradition. The various changes that

continued to take place in the language were thus considered barbaric deviations from this standard.

With the growth of nationalism, and with the increased democratisation of society (Universal franchise was granted in 1931; the Free Education Scheme began to be implemented in 1943; the mass media - the newspapers, the radio, the cinema and so on - were developing fast.) the situation described above began to change in certain very significant ways. Spheres of activity which hitherto had been the virtually unique domain of the English-educated bilinguals began to become more and more accessible to the common people who, while not abandoning their traditional ways of life, now began to participate in a whole new order in a way they had not done before. Since these people did not know English, this meant that the languages they used were called upon to handle aspects of experience which they had not very much been confronted with up to now. Nationalist sentiment, which brought about such changes as the replacement (not yet completed) of English by the native languages in various spheres of life, helped to add momentum to the change described.

Because, however, both colloquial Tamil in all its varieties and the standard of the traditionalists were out of touch with the aspects of life they were now called upon to handle, neither of them was entirely suited to the task. This meant that if Tamil was to serve adequately for the purposes of communication in contemporary society, it had to be forged into a new language

capable of handling both the traditional and the non-traditional elements of Tamil society. The people who, whether consciously or not, undertook the task of forging this language were, of course, primarily the educated bilinguals, and the variety of Tamil they based themselves on was an idealization of their own colloquial usage, some elements of which they rejected as non-standard even though they did actually occur in their speech. Out of their efforts, which are as yet far from completed, a standard language that is responsive to the needs of contemporary society has, for the first time in years, begun to emerge. The probabilities are that this standard is likely to establish itself firmly, for, in an idealized form, it is being spread by the mass media to all Tamil-using corners of the country. The largest Tamil daily in the country, the Thinakaran, for example, whose average circulation figures for the first half of 1964 were 23,001 on weekdays, and 26,865 on Sundays,[6] uses and popularizes this standard. This is not, of course, the only kind of modern Tamil that the people of Ceylon are exposed to. Through South Indian films and journals (81 South Indian journals and newspapers were being imported to Ceylon in 1964[7]), and the newspaper, the Virakesari (which had an average daily circulation of 15,594 in the first half of 1964), the people of Ceylon are being exposed to standard Indian Tamil,

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6. Final Report of the Press Commission (Sessional Paper XI - 1964), Government Press, Ceylon, p. 144.
7. Ibid, p. 63.
8. Ibid, p. 144.

which is being evolved in South India in a parallel way to that in Ceylon. Standard Indian Tamil is rather more daring in its departures from traditional norms than standard Ceylon Tamil, and no doubt it will eventually have some kind of influence on the latter. Nevertheless, despite the unsettled state of the language at present, there is emerging a definite standard variety of Ceylon Tamil. This language is used not only by the Thinakaran, but also by the Ceylon Broadcasting Corporation and by many Ceylon Tamils when they are engaged in formal speech (at lectures, political meetings and so on), and, to some extent, in informal speech when subjects like politics, literature, language, economics, history and so on are being discussed. It is not a language to which either the traditionalist, or those to whom good style means the "high" style, whether pure or Sanskritized, extend any kind of approbation. Nevertheless, it is the one variety of Tamil used in Ceylon to which the term "standard" may be applied in any meaningful way. The term "Ceylon Tamil" will, in the present work, be applied to this standard variety of Tamil used in Ceylon.[9]

It is evident from what has been said above that the writer considers both the spoken and the written language in the present work. To many a modern linguist who bases himself on Bloomfield's remark that "writing is not language, but merely a way of recording languages by means of visible marks",[10] the

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9. In the main body of the work, the term "Tamil" will be taken to refer to "Ceylon Tamil" as described above.

10. Bloomfield (1933), p. 21.

inclusion of the written language might appear strange and unacceptable. The writer, however, takes the view[11] that *langue* in Ceylon Tamil manifests itself both in speech and writing, and that both manifestations are equally valid objects of study, for each of them is primary in its own sphere, writing serving purposes which speech cannot, and *vice versa*. In the present work, what is common to the grammar of the spoken and the written languages is recorded, and certain devices that are exclusive to speech are ignored. Among these devices are intonational patterns and so on which support the grammatical system in speech. While the writer's decision to treat the written language imposes certain limitations on the work in terms of material, it makes available to him a ready-made idealization of the language which is, significantly, very much like the idealization which linguists who analyse the spoken language would have to make before they can proceed with their analysis.[12]

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11. See Kandiah (1966), pp. 157 - 8, for a fuller discussion of the point.

12. Bach (1964a) explicitly indicates that actual speech in its raw state is not susceptible to analysis when he says "What we describe is a partially idealized system ... in assembling data for an analysis, a great deal of editing is usually done. Real discourse - especially when spoken in a natural context - is always full of fits and starts and incongruities.", p. 91. Cf. also, Chomsky (1962b): "...the formalized grammar, regarded as a predictive theory, is an idealization in at least two respects: first, in that it considers formal structure independently of use; and second, in that the items that it generates will not be the utterances of which actual discourse is composed, but rather they will be what the untutored native speaker knows to be well-formed sentences. Actual discourse consists of interrupted fragments, false starts, lapses, slurring and other phenomena that can only be understood as distortions of an underlying idealized pattern. It would be absurd to try to incorporate these phenomena directly into a formalized grammar. Actual speech is clearly a complex process in which many interacting factors play a part, not all of which fall within the domain of grammatical study." p. 531.

The model which the writer uses in his analysis of Ceylon Tamil is the transformational model. This fact combines with certain others (these will be described later) to make the study below different from most of the large amount of work already done in the field, and justifies its being undertaken at all. The discussion below will seek to indicate just how this is so. Some of it will be negative in that it will point out various inadequacies in the work already done which the writer will endeavour to avoid in his analysis.

Existing scholarship in Tamil grammar may be, broadly speaking, discussed as three distinct bodies of work. To the first body of Tamil grammatical scholarship belongs the work of the ancient tradition in grammar, the earliest available evidence of which is found in the Tolkaappiyam,[13] which is assigned by some scholars[14] to a pre-Christian era, but which probably belongs to the Fifth or Sixth Century, A.D. This tradition, which held powerful sway in the field of grammar for centuries,[15] and which still exerts considerable influence on Tamil linguistic thought, was based primarily on the principles of the Tolkaappiyam, which themselves were a modification of the principles of Panini's Sanskrit grammar. It is distinguished by the amazing sophistication of its linguistic techniques, and by the remarkable insight it often provides into the workings of the language. To mention but just one of the many

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13. Subrahmanya Sastri (1930).

14. Subrahmanya Sastri (1934), p. 1.

15. See Subrahmanya Sastri (1934) for details about the role of the Tolkaappiyam in the history of the tradition.

ingenious procedural points adopted by the author of the Tolkaappiyam, there is the decision he makes in his chapter Kiḷaviyaakkam "The Formation of Words" to deal very early in his analysis with certain basic syntactic relations within the sentence. Among other things, this enables him, after he has assigned features to the noun, to treat the concordial inflections of verbs as in fact surface features assigned to them by virtue of their relationship with their subject nouns,[16] a treatment that is intuitively satisfactory and throws very useful descriptive light on this particular aspect of behaviour of verbs. It might be pointed out that in this matter there is no difference of treatment between the Tolkaappiyam and a modern transformational work.

For all its virtues, however, the tradition suffers from certain serious shortcomings. For one thing, the language has changed considerably over the years, and the analyses of the various etats de langue that the tradition preserves are not altogether relevant to modern Tamil. There are certain other more important shortcomings, however. Among them is the consistent failure of the tradition to clearly demarcate grammatical and non-grammatical features. The Sollatikaaram of the Tolkaappiyam, which deals with morphology and syntax, contains among its sutras dealing explicitly with grammar, sutras such as, for example

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16. Subrahmanya Sastri (1930), sutra 11, p. 7. Needless to say, the terminology of the Tolkaappiyam differs from the terminology used above.

kuRittoon kuuRRunt terittu moḻi kiḻavi.[17]

"The idea of the speaker or writer should be definitely expressed."[18] ,

which may be said to deal with stylistics,

paakalu

iiRRumin Risaykku meeyee niRuti kuuRRuvayi nooraḻa/murittee.[19]

"Ē used at the end of a stanza may also have one mātrā." ,

which deals with metrics,

avayal kiḻavi maRayttanar kiḻattal.[20]

"One should not use obscene words and hence should (only) use such words which can suggest them." ,

which, on moral grounds, urges the use of euphemisms instead of obscene words,

vinaavuṉ seppee vinaavetir varinee.[21]

"Even a question may be taken as ceppu (statement), if it answers a question." ,

which uses contextual and situational criteria to define the functions of a formally defined unit, and

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17. Subrahmanya Sastri (1930), sutra 55, p. 45.
18. The rather free "translations" given here and in all instances below where sutras are quoted from the Tolkaappiyam are all Subrahmanya Sastri's. They are not always too satisfactory.
19. Subrahmanya Sastri (1930), sutra 286, p. 212.
20. Subrahmanya Sastri (1930), sutra 442, p. 275.
21. Subrahmanya Sastri (1930), sutra 14, p. 8.

nikaḻuuu ninRa palarvaray kiḻaviyin
uyartiṇay orumay toonRalu murittee
anna marapin vinayvayi naana.[22]
"A noun common to uyartiṇay (the higher gender) and axRiṇay (the inferior gender) may also be determined to denote uyartiṇay singular through particular verbs of the form seyyum ("do") suited to it.",

which uses collocational features (what verbs nouns occur with) as a discovery procedure for determining the gender of homonymous nouns which are specified differently for gender.

Even more damaging than the kind of confusion illustrated in the preceding paragraph are the shortcomings which stem from the semantic-cum-taxonomic criteria which the tradition, despite its almost transformational approach to certain problems, often uses. These shortcomings are especially evident in the treatment of the case suffixes in the Tolkaappiyam. The author of the work identifies case suffixes by the distributional feature of their cooccurrence with nouns,[23] and lists and classifies them primarily

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22. Subrahmanya Sastri (1930), sutra 173, p. 156.
23. kuuRiya muRayi nurupunilay tiriyaatu
iiRupeyark kaaku miyaRkaya venpa.
"The case suffixes mentioned above are suffixed without any modification of form to the noun."
(Subrahmanya Sastri (1930), sutra 69, p.64.)

according to phonological shape.[24] As a result of following this procedure, he fails to account for the very significant fact that what is phonologically a single case suffix can, in fact, occur in a variety of syntactic functions, some of which, moreover, it shares with other case sufiixes. He does show an awareness of this fact, but attempts to supply the deficiency of his model in a very unsatisfactory manner. Firstly, he lists various meanings of each of the case suffixes, as, for example, in

> ataRkuvinay uṯaymayi nataRkuṯam paṯutalin
> ataRkuppaṯu poruḷi natuvaaku kiḷaviyin
> ataRkuyaap puṯaymayi nataRporuṯ ṯaatalin
> naṯpiR pakayiR kaataliR siRappinenRu
> apporuṯ kiḷaviyu matanpaala venmanaar.[25]
>
> "They say that the dative case denotes the object for which an action is done, the object to which one subjects himself, the object to which another is apportioned, the object of transformation, the object which is suited to another, the aim of an action, the object of friendship, enmity, love, superiority etc."

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24. avaytaam
peyar ay oṯu ku
in atu kaṇviḷi yenmu miiRRa.
"They (the case inflections) are peyar-veeRRumay ..., ai-veeRRumay ..., oṯu-veeRRumay ..., ku-veeRRumay ..., in-veeRRumay ..., atu-veeRRumay ..., kaṇ-veeRRumay ..., along with viḷi-veeRRumay." (Subrahmanya Sastri (1930),sutra 64, p.57.)
The form preceding the hyphen in each of these labels for cases, excluding the first and the last, represents the phonological shape of the inflection.

25. Subrahmanya Sastri (1930), sutra 76, p. 84.

This kind of semantic description is by itself unsatisfactory. An even stronger objection to the method adopted in the sutra quoted is that by listing the various "meanings" of the dative case inflection as he has done, the author of the Tolkaappiyam obscures the fact that some of these meaning distinctions are most profitably accounted for in terms of different syntactic processes (see rules below for an explicit formalization of these processes).

Having listed the meanings of the case suffixes in this manner, the author of the Tolkaappiyam proceeds to list as various additional uses of each of them certain meanings and functions it shares with other cases suffixes. An example of such a list is the sutra

itana tituviR Rennuŋ kiḻaviyum
atanayk koḻḻum poruḻvayi naanum
atanaaR seyaRpaṭaR kotta kiḻaviyum
muRaykkoṇ ṭeḻuntu peyaRssoR kiḻaviyum
paalvaray kiḻaviyum paṇpi naakkamuŋ
kaalatti naRiyum veeRRumayk kiḻaviyum
paRRuviṭu kiḻaviyun tiirntumoḻik kiḻaviyum
anna piRavu naamka nurupin
tonneRi marapina toonRa laaRee.[26]

"The fourth case is used from very ancient times in the following meanings: - in place of the sixth case in

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26. Subrahmanya Sastri (1930), sutra 110, pp. 123 - 4.

> such sentences as 'this of this is of this sort'; in place of the second case in expressions like 'this will hold that'; in place of the third case in sentences like 'this is fit to be done by him'; in place of the sixth case denoting relationship; in place of the fifth case denoting the exact position of land, and comparison; in place of the seventh case denoting time; and before the roots paRRu -viṭu and tiir which generally take the fifth case."

This procedure, which is consistent with the author's approach, is very unsatisfactory. Having listed and classified the case suffixes by taxonomic means, he goes on to treat any overlap of function among them in terms of a sort of deviance from the fixed norms associated with the fixed classes he has set up, for to treat it otherwise would render the entire classification meaningless. The evidence, however, clearly shows that some aspects of the classification are indeed meaningless, for in terms of syntactic functions and relations, two or even more case suffixes may at times have to be taken together as different manifestations of a single unit, even though in other places they may have to be kept apart as distinct units.

It is apparent from the preceding discussion that the taxonomic-cum-semantic methodology of the author of the Tolkaappiyam, which characterises the work of the entire ancient grammatical

tradition, often causes him to fall short of descriptive adequacy. The inadequacy stems from his failure to distinguish the deep and the surface structures of the language (these notions will receive explicit formulation below). Where deep and surface structures approximate each other, taxonomically defined units could appear to serve adequately the purposes of description, since apparently little more of significance remains to be stated about these units once they have been set up on taxonomic grounds. Generally, however, the deep and surface structures of a language are different. Hence again and again the dependence of the Tolkaappiyam and of the tradition on taxonomically defined units causes them to account inadequately for deep syntactic relations. They seldom betray their intuition about these relations, striving with the aid of semantic criteria to make good the deficiencies they suffer from on account of their dependence on taxonomic units. The fact that the criteria they choose for the purpose are semantic, however, ensures that the returns of their effort are minimal.

The second body of Tamil grammatical scholarship referred to above consists of the work of various western scholars.[27] This group of scholars, whose work was done during a period exten-

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27. Anderson(1821), Beschi(1831), Pope(1859) and (1911), Caldwell(1875), Bloch(1954), Meile(1945), Arden(1954).

ding from the Eighteenth Century to the middle of the Twentieth Century, do not, in fact, represent a tradition as such: their methods and their aims differ too much for this. For instance, Arden's and Meile's aims are pedagogic, while Caldwell's are historical. Again, although all of them have very obviously drunk deep of the ancient grammatical tradition, the extent of their indebtedness to it in their work varies somewhat, with Pope and Anderson representing an extreme of dependence on it as compared with the others. Nevertheless, it is convenient to treat them together for the reason that all of them on the whole bring to their analyses of Tamil the techniques and terminology of western pre-Bloomfieldian linguistics. This does not always lead them to the disastrous results which might be expected. Partly this is because they all basically take into account the analysis of the ancient Tamil grammatical tradition, which prevents them from distorting too much the facts of Tamil grammar. Moreover, some of them at least show an acute awareness of the fact that Tamil is different from the western languages they have knowledge of. Meile, for example, compares French and Tamil sounds with the warning, "It shall be borne in mind that there is no real equivalence."[28] To some extent, too, there is justification for pedagogic grammars whose aim is to teach Tamil to Westerners approaching the language from the standpoint of the western tradition.

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28. Meile(1945), p. 11.

There are occasions, however, when the attempts of these scholars to handle the Tamil language within the framework of pre-Bloomfieldian western linguistics lead them to descriptively inadequate interpretations of the facts of its grammar. This is seen, for example, in Caldwell's statement that Tamil has "no relative pronoun whatsoever, and .... the place of the relative pronoun is supplied by a part of the verb which is called the relative participle...."[29] The fact, however, is that although in translation work certain constructions which involve relative participles in Tamil will be used to translate certain constructions which involve relative pronouns in English, and vice versa, the functions and behaviour of the relative participle within the system of Tamil are completely different from the functions and behaviour of the relative pronoun within the system of English. There can just be no question of isolating by segmentation the two units concerned in the two languages, and then suggesting that there is a one-to-one correspondence between them, for two different surface systems are involved.

The most extreme examples of this kind of error are found in Beschi, who must, however, be excused for being no more than a creature of his times. Illustrative of the kind of attitude he takes into his analysis is his rather bewildered complaint that "the Tamil Natives do not follow the excellent European way of placing the Vowel after the Consonant in order to form

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29. Caldwell(1875), p. 410.

syllables, but from the Consonant and Vowel joined together they make a third figure"[30], a practice which, he goes on to say in a tone of stern admonition, "certainly is not commendable, and perplexes young beginners."[30]

The other shortcomings of the work of the western scholars stem from their use of taxonomic methods and semantic criteria. The kind of disability they must submit themselves to on account of their dependence on taxonomic criteria is well illustrated by the following statement of Caldwell's: "There is a peculiarity about the words used as neuter participial nouns in Tamil....Each of them is used in three different significations, viz. - as the third person neuter of the verb, as a neuter relative-participial noun, and as a verbal participial noun. Thus seykiRatu in the first instance means it does; in the second, that which does; in the third, the doing or to do."[31] Caldwell has here been led by his taxonomic criteria based on simple segmentation to treat as one form three completely different units which in a transformational grammar would be derived in three completely different ways. In the first of the three meanings Caldwell lists, seykiRatu is formed by the Concord transformation adding to the verb sey followed by the Present tense inflection, the inflections of number, gender and person, these inflections

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30. Beschi(1831), p. 2.

31. Caldwell(1875), p. 429.

being automatically determined by the features characterising the subject NP. In the second of Caldwell's meanings, seykiRatu is formed by an Adjectivalization transformation which embeds a sentence containing the verb sey followed by the Present tense inflection in Qualifier position before the pronoun atu, converting the verb into its Conjunctival Participial form in the process. In the third of Caldwell's meanings, seykiRatu is formed by a nominalization transformation which nominalizes a sentence in which sey, inflecting for the Present tense, is the main verb. In Caldwell's treatment, the comparatively trivial surface factor of the phonological identity of the segments marked out is accorded prominence at the expense of the deep differences among the three units involved. Like the grammarians of the ancient Tamil tradition, Caldwell tries to extricate himself from the impossible position his taxonomic treatment leads him to by using semantic criteria, but this does not in fact make good the loss of descriptive adequacy.

Often, too, this kind of dependence on semantic criteria misleads the analyst. For example, Arden, having defined the verbal noun as a unit which "names the action of a verb", draws up a list of verbal nouns[32] which includes, among others, the forms aRivatu "understanding", and paṯippu "learning". The association of these two forms under a single label is, however,

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32. Arden(1954), pp. 219-227.

misleading. The first of them is derived by means of a nominalization transformation which operates on a sentence containing aRi as its main verb, converting the whole sentence into a nominal in the process. The second is produced by means of a different kind of derivational process, details of which the writer is not fully aware of. What is certain, however, is that the form patippu by itself acts just like any other noun, and is not merely a part of a larger nominalized sentence as aRivatu is.

The brief arguments set out above demonstrate that the work of the western scholars, too, suffers from certain very important disabilities that interfere with descriptive adequacy.

The third body of grammatical scholarship in Tamil consists of work done, both in English and in Tamil, on modern lines. Here, too, it is convenient to discuss the work as three separate bodies. The first body consists of published works like Varatharajan(1947), Siinivaasan(1960) and Ilakkuvanar(1961), produced by Tamil scholars working on their own language. At the outset it is necessary to indicate that these works start off by assuming the analysis of the ancient tradition in grammar. They then proceed to force this analysis with hardly any changes in it into the mould of modern linguistics, which, moreover, some of them (like Ilakkuvanar) have not quite understood. A most revealing statement from the point of view of the comment just made is to be found in Siinivaasan, the best of the works belonging

to the group under discussion:

> oru moḻiyin iyalpay uḷḷavaaRu aaraayntu terivippatu moḻiviḻakkaviyal enpar....tamiḻ moḻiyin iyalpay uḷḷapaṭi aaraayntu viḻakkum nuul itu (tolkaappiyam)....anta nuulin vitikaḻay oṯṯip peritum moḻi iyaṉkuvataal ataykkoṇṭu moḻiyin potuviyalayum ooraḻavu aRiya muṯikiRatu.... tamiḻin iyalay naṉku viḻakkum nuul itu."[33]
>
> "Descriptive analysis is the investigation and revelation of the nature of a language as it is .... This (the Tolkaappiyam) is the work which investigates and explains the nature of the Tamil language as it is ....Since the language behaves very much according to the rules of this work, it is possible to discover to some extent the general characteristics of the language by its means....This is the work which best explains the nature of Tamil."

Consistent with the very representative attitude expressed in the lines above, the works under discussion contain in practice very little more than a "translation" of the analysis of the Tolkaappiyam and other ancient works into the terminology of modern descriptive linguistics. As this implies, these works often adopt the jargon of modern descriptive linguistics with very little of its methodology. Consider. for example, the semantic-cum-taxonomic

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33. Siinivaasan(1960), pp. 9-10.

way of handling the notions of tanvinay [[self-verb]] and piRavinay [[other-verb]] that Siinivaasan borrows from the tradition. The tradition does not appear to be very consistent in its treatment of these notions in terms of which certain pairs of verbs are classified. It lists as the defining features of these notions, however, the meanings of the two classes of verb set up on their basis, and the morphophonemic distinctions between them. Siinivaasan borrows both the notions of tanvinay and piRavinay and their definitions from the tradition. He distinguishes between the two classes of verb as follows:

> seyvaanin seyal seypavanayee saarvatu tanvinay....aakum.
> seyvaanin seyal piRarayoo piRavaRRayoo saarvatu piRavinay ....aakum.[34]
>
> "When the action of the doer is associated with the doer himself, the verb which represents it is tanvinay. When the action of the doer is associated with other people or other things, the verb which represents it is piRavinay."

He then proceeds to list the various morphophonemic features that mark the distinction he has set out. To the extent that he uses semantic criteria in establishing his distinctions his methodology is alien to that of the modern descriptive linguistics he professes to practise. More significantly, to the extent that he utilizes the semantic-cum-taxonomic methods of the ancient tradition his

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34. Siinivaasan(1960), p. 200.

analysis falls short of descriptive adequacy, for it fails to account for the significant syntactic relations that are in fact involved. (The discussion of the problem in the main body of the present work will show just what these relations are.) This failure of descriptive adequacy, which characterizes the work of the group of scholars under discussion, renders much of it valueless.

The second body of modern linguistic work on Tamil consists of four unpublished works, Thananjeyarajasingham(1961), Corré(1962), Pillai(1963) and Subbiah(1965). Courtesy demands that since these works are unpublished they should not be discussed in detail. Certain general points will, however, be made without any unfairness to the authors in question. Of the four works listed, all but Pillai(1963) are taxonomic works, based on various of the branches grafted onto the tree of post-Bloomfieldian linguistics. Corré, it is true, explicitly claims to use transformational criteria in his work. The notion of transformational grammar he has is, however, different from the writer's. Thus his work does not contain a single phrase structure or transformational rule of the kind found below. Where he does use transformational notions, it is primarily as a discovery procedure, or as some sort of extra information about units or groups of units that have previously been established on taxonomic grounds. Thus it would not be unfair to characterize the work as basically taxonomic, like the other two works it is associated with above.

The writer is, of course, of the opinion that taxonomic models limit the analyst who uses them. In the case of these works, however, he will not for reasons already given discuss particular examples with a view to exposing the deficiencies of the models used. Examples will not, however, be hard to provide if necessary. Below, moreover, some of the deficiencies that taxonomic models in general suffer from will be stated, and the criticisms listed there will be equally applicable to the works under discussion.

In any event, there are other radical points of disagreement between the three works under discussion and the present work, all relating specifically to points of interpretation of the facts of the language. To mention just one (without discussing it), the problem of basic sentence patterns in Tamil is resolved, whether explicitly or implicitly, in a different way by each of the works concerned. Thananjeyarajasingham(1961) has one pattern, Corré(1962) six, and Subbiah(1965) three, while the present work has one pattern which differs from all of these as much as they differ from each other. Details in support of the writer's interpretation will be found in the main body of the work.

The consideration mentioned in the previous paragraph serves equally to differentiate Pillai(1963) from the present work, despite the common assumptions that both make about the nature of linguistic analysis. To confine the illustration to

the problem already mentioned, Pillai sets up two basic sentence patterns for Tamil.

Apart from such interpretative matters, however, the two works have to be differentiated on certain other counts as well. Pillai(1963) is based on Chomsky(1957b), while the present work is based largely on Chomsky(1965). During the period between Chomsky(1957b) and Chomsky(1965), transformational grammar changed considerably, and the dimensions of the difference between Pillai(1963) and the present work are more or less the same as the dimensions of the difference between those two works.

Finally to be considered is the work of the Czech scholar, Zvelebil. The discussion below will be confined to his two most important descriptive articles, Zvelebil(1962) and Zvelebil(1965). In the first of these Zvelebil argues that "string constituent analysis based upon tagmemic theory....is most conveniently applicable and fully adaptable to the syntax of Tamil."[35] In the second, having stated that "generative grammar, being increasingly preoccupied with rules, instructions and processes, tends to dispose of and to reject the very concept of linguistic units which, according to our conviction, actually exist in language", he goes on to assert,"Thus it happens that the various branches of generative grammar present linguistic patterns and units, that is linguistic structure, not directly but rather obliquely, via a

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35. Zvelebil(1962), p. 142.

set of rewrite rules, and the reader of such rules is supposed to deduce patterns from them."[36] He then makes the claim that "taxonomy and generation should not be opposed as two irreconcilable viewpoints; on the contrary, they should rather supplement each other, forming a new and qualitatively higher and richer unity which would not be characterised by 'generation-versus-taxonomy' but by 'generation-and-taxonomy'."[37]

The points Zvelebil makes in the quotations given above are all equally unacceptable. Since most of them appear to stem from his belief that linguistic units "actually exist in language", it will be most profitable to commence the discussion with a consideration of this belief. It is, of course, impossible to say what Zvelebil means when he claims that linguistic units "actually exist in language". However, considering his avowal a few lines on that his approach is "'frankly' taxonomic"[38], and his complaint that transformational grammars obscure linguistic units, his contention is presumably that the inventories he constructs by means of his taxonomic procedures of listing and classifying data have a validity independent of the actual model of analysis used, merely "revealing" pre-existing units. The major fallacy in Zvelebil's assumptions stems from his disregard of the fact that the establishment and dilineation of linguistic

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36. Zvelebil (1965), p. 602.
37. Zvelebil (1965), p. 603.
38. Zvelebil (1965), p. 602.

units in terms of data are by no means pre-determined, being decided in every case by the theoretical framework that the linguist brings to the analysis. As Lees puts it, "an observation is entirely meaningless unless we have in mind....how that observation is supposed to be pertinent to others, or what sort of regularity it is supposed to illustrate....there can be no data without a theory, no observation without some preconception."[39] That is to say, even the problem of observational adequacy (which is achieved "if the grammar presents the observed primary data correctly"[40]) is not, as Zvelebil assumes, a simple one, for "what is observed is often neither relevant nor significant, and what is relevant and significant is often very difficult to observe"[41], the decisions in these matters being "determined in part by the possibility of a systematic theory."[42] Thus one linguist may entertain a highly trivial theory according to which he deems it necessary to draw up an inventory of all the four letter words in a language. Although it is difficult to envisage any kind of useful theory to which such an inventory can be of relevance, nevertheless, in terms of that theory, the analyst will be justified in setting up the class of four letter words as a linguistic unit. But this is a very different thing from saying that the linguistic unit thus

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39. Lees(1965), p. 22.

40. Chomsky(1964), p. 28.

41. Chomsky(1964), p. 28, fn. 1.

42. Chomsky(1964), p. 28, fn. 1.

set up "actually exists" in that language. Similarly, another linguist may have his theory geared to the explicit formalization of the deep seated regularities of a language. His formalization of the abstract concepts involved will be to some extent in terms of units. But this again, as in the former case, is a completely different thing from saying that these units, which are only part of the apparatus which the linguist uses in his analysis, "actually exist" in that language. As Chomsky points out, these units etc. are not concrete elements, but "elements in a system of representation which has been constructed so as to enable us to characterize ....the set of sentences in a linguistically meaningful way."[43]

In establishing these units, as well as in constructing the system of representation by means of which the structure of a language is characterized, there is a fundamental difference between transformational grammars and taxonomic grammars. The difference is that whereas taxonomic grammars make their decisions on these matters on ad hoc grounds, transformational grammars do so on empirically motivated grounds. The justification of this claim requires a brief excursion into the aims and methods of transformational grammars.

Any given transformational grammar must meet the "condition of generality on grammars"[44], by which it is required to be "constructed in accordance with a specific theory of linguistic structure in which....terms....are defined independently of any particular language."[44] This theory or model is geared to three

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43. Chomsky(1962a), p. 216 in Fodor and Katz(1964).
44. Chomsky(1957b), p. 50.

criteria of adequacy, observational, descriptive and explanatory adequacy. The achievement of observational adequacy is essential to the achievement of the other two kinds of adequacy. This is not, as has already been indicated, a simple matter. Nevertheless, since a grammar which aims only for observational adequacy is concerned merely with giving an account of the raw data, it may be said that with the achievement of observational adequacy a grammar has achieved only the lowest level of success for grammars.

A grammar that achieves descriptive adequacy achieves the next higher level of success for grammars. Descriptive adequacy is achieved by a grammar when it "gives a correct account of the linguistic intuition of the native speaker, and specifies the observed data....in terms of significant generalizations that express underlying regularities in the language."[45] To illustrate, a descriptively adequate grammar of Tamil will have firstly to indicate explicitly that the well-formed grammatical sentence of Tamil

puli konRa yaanay kaaṭṭil iruntatu.

is ambiguous in that it can be assigned one of two readings,

"The elephant which the tiger killed was in the forest."

or

"The elephant which killed the tiger was in the forest." ;

that in both these readings, <u>yaanay</u> "elephant" is the subject of

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45. Chomsky(1964), p. 28.

the main verb, iruntatu "was", of the sentence, but that in its first reading it is the logical object of the verb kol "kill", being grammatically related to this verb as it is in the sentence

puli yaanayayk konRatu.
"The tiger killed the elephant.",

while in its second reading, it is the logical subject of kol, being grammatically related to this verb as it is in the sentence

yaanay puliyay konRatu.
"The elephant killed the tiger." ;

that in its first reading, the sentence can be said to correspond with a passive version of it

puliyaal kollappaṭṭa yaanay kaaṭṭil iruntatu.
"The elephant which was killed by the tiger was in the forest.",

whereas in its second reading, there is no such corresponding passive version as the ungrammaticality of

*puli kollappaṭṭa yaanayaal kaaṭṭil iruntatu.

shows; that in its second reading, the sentence can be said to be synonymous with an expanded version of it

puliyay konRa yaanay kaaṭṭil iruntatu.,

while in its first reading, it is impossible to reconstruct such

a synonymous sentence, since the resulting string

*puli konRa yaanayay kaaṭṭil iruntatu.

would be ungrammatical; and so on. Secondly, a descriptively adequate grammar of Tamil will have to indicate in general terms the basic regularities which the user of the language has learned and which enable him to make all the distinctions and establish all the relationships described above.

The highest level of success, explanatory adequacy, is achieved by a grammar when the linguistic theory associated with it "provides a general basis for selecting a grammar that achieves the second level of success over other grammars consistent with the relevant observed data that do not achieve this level of success."[46] Such a theory will be concerned with discovering the formal properties of descriptively adequate grammars of various languages which distinguish them from the mass of grammars compatible with the available data. It will, therefore, be concerned with the deep underlying features that all descriptively adequate grammars share, features "that are defining properties of natural language, and that distinguish natural languages from arbitrary symbol systems."[47] Its interest in these features of descriptive grammars follows from its claim that many aspects of a given

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46. Chomsky(1964), p. 28.

47. Chomsky(1965), p. 36.

descriptively adequate grammar of a language are in fact to be explained in terms of a general and deep empirical assumption about the nature of language as a human activity.

With the discovery of features of the kind referred to, that is features which may be attributable to the form of language itself, the theory will be able to specify the form of descriptively adequate grammars of languages. It will, that is, be able to characterize the notion "generative grammar". Its characterization of the notion will be in as narrow a manner as is compatible with the known diversity of languages, and its success in the matter will depend on its developing "as rich a hypothesis concerning linguistic universals as can be supported by available evidence."[48] It will proceed in this matter by stating in language-independent terms the formal conditions on grammar, thus limiting the choice of a descriptively adequate grammar for a given language. Its tasks here will be minimally "to characterize precisely the possible kinds of linguistic rules, the possible kinds of structural descriptions, and the mechanical procedures which automatically, uniformly, and non-arbitrarily associate structural descriptions with generated sentences."[49] The devices and procedures it characterizes will be just those which make possible the explicit formulation of the generalizations that a descriptively adequate grammar will contain, generalizations that account for the kind of data set out in the discussion of the ambiguous sentence above.

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48. Chomsky(1966), p. 21.

49. Postal(1964b), p. 138.

There is one further way in which a theory which is concerned with explanatory adequacy has to limit the choice of a descriptively adequate grammar for a given language, and this is by incorporating as an intrinsic property of itself an evaluation procedure which will indicate which among available grammars is "the highest-valued grammar permitted by the theory and compatible with given primary linguistic data."[50] The justification for the particular choice made would be in terms of a notion of simplicity, "simplicity" referring to "the set of formal properties of grammar."[51] That is to say, the notion of simplicity is not defined a priori outside the theory, but is an empirical hypothesis about "the set of formal properties of grammar" which the theory incorporates. The construction of the evaluation procedure based on the notion is thus an empirical matter: once it has been determined what the significant generalizations in language are, the evaluation procedure will be constructed to favour the most adequate statement of these generalizations. Thus it is the evaluation procedure in the theory which provides the rationale for the various notations and conventions adopted, of which it is asserted that they are just the notations and conventions which will allow the simplest and most adequate statement of the facts. (See Chomsky (1965), Ch. 1, § 7, and Halle (1961), for a more specific discussion of the point.)

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50. Chomsky (1965), p. 40.
51. Chomsky (1957b), p. 53.

A theory such as has been outlined above seeks to provide an implicit definition of human language in terms of which the linguistic intuition of the user of any language may with motivation be described. By specifying the form of grammar (to use the term "grammar" with systematic ambiguity "to refer, first, to the native speaker's internally represented 'theory of language', and, second, to the linguist's account of this"[52]), it provides an explanation of the competence of the user of the language. That is, the theory asserts that in any language "data of the observed kind will enable a speaker whose intrinsic capacities are/as represented in this general theory to construct for himself a grammar that characterizes exactly"[53] his linguistic intuition. Moreover, it provides a principled basis for the construction of such a descriptively adequate grammar, which will now be justified on deep empirical grounds, being based on an empirical hypothesis about the very form of human language.

Like any empirical hypothesis, this theory is open to empirical confirmation or falsification, and this applies both to the formal conditions it states and to the evaluation procedure it incorporates. To illustrate, the theory claims among other things that the simplest and most adequate way of accounting for the linguistic intuition of the user of any given human language is by an ordered series of rewrite rules of the phrase structure

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52. Chomsky (1965), p. 25.
53. Chomsky (1964), p. 28.

type followed by a series of transformational rules which would map the base structures generated by the former kind of rule into surface structures. This is an empirical claim about human language which can be confirmed by showing that it satisfactorily accounts for the intuition of the user of a language, or falsified by showing that it does not do so. Thus any criticism of the theory which can be taken seriously will have to do the latter.

This is just where Zvelebil (to return at last to the discussion of the points he makes) fails. He shows a complete unawareness of the points made above. Instead, therefore, of making a valid criticism of transformational grammars, all he does is to assert that such grammars obscure linguistic units which "actually exist in language" (a point which has already been dealt with),and that the taxonomic model he advocates does not do so. Such a "criticism" carries no weight, for the model he advocates as superior to the transformational model still suffers from the basic limitations (described again and again in transformational literature) of phrase structure grammars, the limitations which made it necessary for Chomsky to develop the transformational model in the first place. Such a model ignores the criteria of adequacy described above and pays no attention to the form of grammar in terms of which the linguistic intuition of the user of a language may be explained. Its goal, then, is simply that of "formulating procedures of segmentation, classification and substitution which could be used to discover the grammatical analysis of arbitrary

sentences in arbitrary languages." [54] As Postal points out, [55] this limits the model in two basic ways: firstly, it provides structural descriptions that are unable in many cases to account for the kinds of structural information available to the user of of the language, and secondly, it provides too much structure, enumerating a wide and extraordinarily complex variety of sentence types, excluding simple and easily discovered regularities, and repeating essentially identical parts of the grammar in the process. Moreover, the structure it provides, the units it sets up, are completely ad hoc and unmotivated, for there is no principled basis on which it chooses certain observable regularities as being of greater significance (and, therefore, to be included in the grammar) than others.

Zvelebil shows no concern for these all-important considerations relating to the justification of grammars, and takes a short cut past them to a simple assertion that transformational grammars suffer from certain inadequacies which taxonomic grammars are supposed to avoid. However, to the extent that he leaves unanswered the criticisms of taxonomic grammars that the transformational grammarian makes, and to the extent that he provides no empirical falsification of the transformational model, his criticism is seen to be no criticism at all, neither advancing the cause of the taxonomic model, nor retarding the cause of the transformational model.

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54. Postal (1964b), p. 141.

55. Postal (1964b), pp. 144 - 145.

There is one specific charge Zvelebil makes against the transformational model which requires further discussion, and this is that it rejects the concept of linguistic units by presenting them (as well as linguistic patterns) not directly (whatever this may mean) but obliquely. Zvelebil has here misapprehended the aims and methods of transformational analysis. What a transformational grammar rejects is the taxonomic notion of linguistic units, and most certainly Zvelebil's notion of linguistic units, which it would not be quite fair to attribute to taxonomic models. Zvelebil's notion of linguistic units has already been dealt with, and below attention will be confined to the taxonomic notion of them.

A taxonomic grammar lists and classifies the raw data of a language on ad hoc grounds. Each list of elements thus set up is treated as representing among other things a linguistic unit, and any item belonging to the list is taken as an illustration of the unit it represents. This kind of unit, defined by means of superficial descriptive features chosen on ad hoc grounds is of no interest to the transformational grammarian, for as Lees points out[56], a collection of such units makes no empirical claim about the data it is based on, it asserts nothing interesting about the language to which the data belongs. A transformational grammarian will consider that a significant result has been reached only when the grammar makes generalizations that "embody all the deep-seated

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56. Lees(1965), p. 23.

regularities in language that we know about so far."[57] These generalizations are made in explicit,formal terms by the rules of the grammar. Part of its formalization of the generalizations will, inevitably, be in terms of linguistic "units", like Sentence, NP, VP and so on. The "definitions" of these "units" will be provided by the rules themselves, which will incorporate the full set of necessary and sufficient conditions that each of these "units" must obey. It will be just these conditions that distinguish the "units" one from another. That is to say, the "units" of a transformational grammar are "defined" in terms of the entire complex of behavioural features that characterize them, and not in terms of certain of their more superficial taxonomically describable features that are selected from among this complex in an unmotivated way. Thus far from obscuring linguistic units, a transformational grammar describes them in the most explicit and adequate way possible. Considering this fact, what Zvelebil's charge against transformational grammars amounts to is that the rules of these grammars do not operate with taxonomically defined "units" as input. It is evident from all that has been said above, however, that this charge is completely innocuous as a criticism of transformational grammars. Transformational grammars just do not require such "units" as input to their rules. As Lees puts it, these rules "do not operate upon sentences, they explicate the notion of sentencehood"[58], and this statement would be true not only of the "unit", Sentence, but also

57. Lees(1965), p. 25.
58. Lees(1965), p. 23.

of any other "unit" the grammar may choose to deal with.

It is not surprising in the light of the preceding discussion that Zvelebil's assertion that generation and taxonomy should not be considered as two opposed and irreconcilable viewpoints carries no conviction. He attempts to justify his assertion by sketching a fragmentary illustration of the kind of "generation-and-taxonomy" model he envisages. This model does not, however, answer the criticisms that transformationalists make of taxonomic models. In the first place, it is not at all certain that the tagmemic model can in fact be modified to generate all and only the sentences of a language without unnecessarily complicating the rules of the grammar. However, accepting Zvelebil's claim that with the aid of indices and such devices the model can so be modified, the result will still be of no significance, for it ignores the criteria of adequacy by which grammars are justified. This means that at the most it can be expected to have what Chomsky calls "weak generative capacity", not"strong generative capacity". However, as Chomsky points out, "the fact that a grammar weakly generates a language is hardly of any interest. What is important is that it should do so in such a way as to assign to each sentence the correct deep and surface structure, and beyond that, that it succeeds in the task of strong generation in an internally motivated way."[59] Zvelebil's model fails to meet both the requirements

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59. Chomsky(1966), pp. 48-49.

that Chomsky mentions. It does not make any provision for the distinction between the deep and surface structures of a sentence. The distinction has been clearly explicated in Chomsky(1964), (1965) and (1966), and here it will suffice merely to repeat the conclusions that Chomsky draws:

> "the surface structure of a sentence is a proper bracketing of the linear, temporally given sequence of elements, with the paired brackets labelled by category names (that is, a labelled tree diagram, with such categories as Sentence, Noun Phrase, Verb Phrase, Noun and a small number of others serving as labels.):
> "the deep structure of a sentence is in general not identical to its surface structure, but is a much more abstract representation of grammatical relations and syntactic organization."[60]

Transformational grammar, having made the distinction described above on empirical grounds, goes on to make the claim that the most adequate way of handling it is by means of two basic sets of rules, the first of which has just the peculiar properties that characterize phrase structure rules, and the second, just the peculiar properties that characterize transformational rules. No superficial change made in a taxonomic model to generate all possible strings of a language can account for what these sets of rules

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60. Chomsky(1966), p. 37.

account for. To illustrate, the processes which relate active and passive constructions in Tamil in terms of deep and surface structures are not formulable within the taxonomic framework. Again, the treatment of ambiguous sentences within this framework is descriptively inadequate, based as it is on ad hoc formulas. As Chomsky puts it, "the problem in such cases is not to devise a set of formulas that will cover an ambiguous sentence in two different ways. It is first to devise a set of rules which will assign descriptively adequate structural descriptions to each sentence, and second, to motivate this set of rules on general non-ad hoc grounds."[61] The kind of model Zvelebil advocates, by acquiring weak generative capacity becomes able to generate the same set of strings as a transformational grammar, but (and this is crucial) it can by no means generate the same set of structures. Moreover, even the strings it generates are generated on ad hoc grounds.

Clearly then, Zvelebil's claim that his model is "most conveniently applicable and fully adaptable to the syntax of Tamil" is quite wrong. In Zvelebil(1962), for example, its inadequacies are exposed by (among other things) the way in which it compels the author to treat the problem of subjectless sentences like vanteen "(I) came." in Tamil. Before discussing Zvelebil's treatment of the problem, it will be convenient to specify the facts

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61. Chomsky(1964), Discussion of the paper in Lunt, p. 1000.

that a descriptively adequate grammar will account for in dealing with it. Such a grammar will indicate that to the user of the language the monopartite VP sentence vanteen is absolutely synonymous with the bipartite NP ^ VP sentence naan vanteen. That is to say, in the native's intuition there is a basic and essential relationship between the two sentences, a relationship that is so fundamental that he is able to respond to the monopartite sentence as if it were bipartite. The explanation of this response is to be traced to the First Person Singular concordial inflection -een that tha verb in the monopartite sentence takes. Clearly this inflection is the same as the inflection taken by the verb in the bipartite sentence. In the latter case, it is most satisfactorily interpreted as a purely automatic element, assigned to the verb according to tha features characterizing its subject. (The way in which the author of the Tolkaappiyam deals with concordial inflections strongly suggests that this was how he interpreted them.) In the monopartite pattern, however, such an interpretation does not (superficially) appear to be possible. Nevertheless to the native there are no two inflections, only two occurrences of the very same inflection. A transformational grammar meets the demands of descriptive adequacy in this case by accounting for all the factors mentioned above as follows. First, its phrase structure rules generate the bipartite NP ^ VP/ pattern underlying the bipartite sentence above. An obligatory transformation then assigns the

automatic concordial inflections to the verb, the choice of the inflections being uniquely determined by the features of the subject. A later optional transformation deletes NP under certain stated conditions.

Zvelebil's model, while permitting him to generate the two sentences under discussion, is quite unable to provide him with the means of making this kind of descriptively adequate statement about them. He thus attempts to account for the two sentences in terms of a formula consisting of an optional subject tagmeme followed by an obligatory predicate tagmeme. Where the subject is chosen, the result is the bipartite sentence, where it is not, the result is the monopartite sentence. The facts, however, compel Zvelebil to recognize that the monopartite sentence he generates functions exactly like the bipartite sentence; that is, although the underlying pattern from which he derives it is monopartite, it behaves as if there were in fact <u>two</u> categories involved in it. Being a taxonomist, he needs a segment to carry the "extra" category. The only segment available is the concordial inflection, and so he divides his predicate tagmeme into two parts. The second of these, which is the concordial inflection, he terms "bound subject". This converts the monopartite structure into a bipartite one. Clearly, however, this is not quite satisfactory for the concordial inflection does not in fact have the same status as the other elements. Therefore he retreats from the position he

has reached by saying that it appears "most convenient to ignore such bound subjects as slot fillers."[62]

This interpretation of the facts is thoroughly unsatisfactory. It falls short of descriptive adequacy by obscuring the essential relationship there is between monopartite and bipartite sentences on the one hand, and between bipartite sentences of the kind illustrated and other bipartite sentences which do not have a monopartite variant, on the other. This apart, it even falls short of observational adequacy by elevating a purely automatic surface element, the concordial inflection, to the status of some kind of basal element. Shortcomings such as these are, of course, inevitable considering that Zvelebil's model does not permit him to distinguish between deep and surface structures.

Far from the model being adequate for the purposes of analysing the Tamil language, therefore, it is as lacking as any other taxonomic model. It is such considerations in fact which led to the writer's choice of the transformational model in the present work, for this model alone appears to be able to handle the facts of the language in any satisfactory way. As mentioned above, the present work is based largely on Chomsky(1965). Its dependence on that work is not, however, absolute, and various changes of differing degrees of radicalness have been introduced in the actual application of Chomsky's proposals. It is too much to expect a sympathetic reception for all of them, but in every case the reasons that motivated their introduction have been provided.

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62. Zvelebil(1962), p. 128.

II

THE PHRASE STRUCTURE RULES

The present work may most appropriately be described as a "sentence grammar", using the term not as Householder proposes that it be used,[1] but in a quite non-technical sense. It seeks, within the limitations imposed on it by its confinement to the verb, to formulate explicitly the notion of sentence-hood in Tamil by specifying and predicting "all and only the sentences"[2] of that language. Its scope in doing so will, however, be limited to the information provided by the syntactic component, and it will make no provision for the phonological and semantic components a complete transformational grammar will contain. Morphophonemic features too, which in certain works are accounted for in the syntactic component,[3] will, by and large, be excluded from explicit formulation in the rules.

As is evident from the stated aim of the grammar, the unit it will assume as basic is the Sentence, and the language will, following Chomsky, be interpreted as "a set ... of

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1. Householder (1959)
2. Bach (1964a), p. 5.
3. See, for example, Lees (1960c)

sentences, each finite in length and constructed out of a finite set of elements."[4] Some of the features that characterise the sentence involve extra-sentential considerations, such as, for instance, the phenomenon of resumptive concord between identical nominals following each other in consecutive sentences in discourse. The present work will not seek to generalize such features, and will proceed on the assumption that "a grammar describes syntactic structures within the boundaries of single sentences. But .... says nothing about the relations between sentences in a stretch of intelligible discourse."[5] The symbol, then, that the first phrase structure rule (hereinafter PS rule) will rewrite is that which represents the isolated sentence.

The first problem in formulating this rule relates to the nature of the basic sentence patterns of Tamil, the minimal patterns from which all other sentence patterns may be derived in a manner that is both economical and explanatorily adequate. The formalization by a rule of the writer's solution to the problem will, below, be prefaced by a fairly full discussion

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4. Chomsky (1957b), p. 13.
5. Fodor and Katz (1964), p. 353.

of the factors that motivated it.[6]

The most commonly encountered sentence pattern of Tamil may be extracted from sentences like the following:

1. piḷḷay sirittaan.

   "The child laughed."

2. naay tiruṭanay kaṭittatu.

   "The dog bit the thief."

3. iḷaṭsumi kiṇaRRaṭiyil kuḷittaaḷ.

   "Lakshmi bathed at the well."

4. maappiḷḷay kaalay 4.33kku kaḷiyaaṇa viiṭṭukku veḷikkiṭuvaar.

   "The bridegroom will set off for the wedding-house at 4.33 a.m."

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6. The inclusion of this "apologia" is induced by two considerations. One is that, since, as has already been observed (see "Introduction" p.29), traditional work in such syntactic matters has left much undone, very little can be assumed. The second consideration is that the writer's solution to the problem differs significantly from those explicitly stated or implied in recent works, both published and unpublished, using modern techniques of analysis. Since, at least to the extent it differs from such interpretations, the writer's analysis is open to dispute, it appears advisable to explain the reasons that motivated it. It is, incidentally, interesting to observe that each of the modern works referred to provides a different solution to the problem.

5. aṇṇan tampikku paaṭattay teḷivaaka paṭippittaan.
"The elder brother taught the younger brother
the lesson clearly."

1 to 5 share a significant feature: they all consist of two minimal parts, which will, in the discussion below, be taken as filling two different "slots". The first slot is filled by a noun phrase[7] (hereinafter, NP), whose head is in number, gender, and person concord with the head of a predicative phrase[7] (hereinafter, Predicative P) which fills the second slot. The Predicative P consists of a verb[7] head and various phrases (some of them having NPs as heads), clauses, and other elements which modify this head. These three kinds of element will be referred to below as "expansions". Some of these expansions can occur with any verb head, while others are restricted in this respect. Whatever the nature of such details, they are

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7. Terms like Noun Phrase, Predicative Phrase, Verb and so on are in fact labels for elements which are themselves to be delimited and isolated in terms of the kind of behavioral features described here and below. The assumption in using such terms will throughout be that such definitions as are needed will arise out of the statement of the rules which will make explicit "the set of necessary and sufficient conditions" for these elements to be Noun Phrases, Predicative Phrases, Verbs and so on. Lees' comments on definitions in Lees (1965) (from which the words quoted above are taken), provide a good defence of this assumption.

most satisfactorily handled within the framework of a bi-partite pattern, NP ^ Predicative P. The NP may, on the grounds that the verb of the Predicative P is automatically assigned gender, number, and person inflections according to the features characterizing it, be considered as bearing the relationship of Subject to the Predicative P.

Sentences of the kind given next introduce the first set of complications in setting up the basic sentence patterns of Tamil.

6. raamanukku kantanay teriyum.
   "Rama knows Kandan."
7. pi||aykku oru poottal paal kaaɳum.
   "One bottle of milk is sufficient for the child."
8. murukanukku oru periya sampaḷam veeṇṭum.
   "Murukan wants a big salary."

Considered superficially there appears to be little relationship between the pattern illustrated by 6 to 8, and the pattern already set up. 6 to 8 appear to be essentially tri-partite. The last slot is filled by a Predicative P whose verb head is one of a very small class of verbs which do not generally take a tense marker, and which do not inflect for gender, number, and person according to the features characterizing a preceding NP. The verb head may take certain expansions, but these are considerably

limited. The first two slots in the Impersonal pattern(as this pattern will be called) are filled, in 6 to 8, by two NPs, the first of which is in some cases at least intuitively regarded as being related to the Predicative P in much the same way as the subject NP of the bi-partite pattern set up above is related to its Predicative P. The head of this NP, however, inflects for the dative case. The head of the second NP in the pattern is best interpreted as being in the accusative case, which, the morphophonemic rules will show, does not, either here or in other contexts, always have overt phonological exponency.

The differences between the bi-partite pattern set up and the Impersonal pattern as just described appear to be very wide indeed. There is, nevertheless, sound motivation for treating them as surface divergences, introduced by the operation of a transformation on underlying strings of a basic bi-partite pattern. It was observed earlier that the dative NP in sentences of the Impersonal pattern is often intuitively felt to bear the same kind of relationship towards its Predicative P as the subject NP of the bi-partite pattern does towards its Predicative P. This intuition is given substantial justification in the case of at least one of the verbs which occur in the pattern, <u>teri</u> "know", by sentences like

9. raaman kantanay terintu koɳtaan.

"Rama {knew / got to know} Kandan."

9 is closely related to 6, in that it contains the identical lexical items, and is well nigh synonymous with it,[8] any difference in meaning being attributable primarily to the Auxiliary verb that teri has taken in 9. The major difference between 6 and 9 is that the lexical items which in 6 were arranged in the tri-partite Impersonal pattern are in 9 arranged in the bi-partite NP ^ Predicative P pattern. The dative NP of 6 is, in 9, in the nominative case, and the auxiliary verb attached to teri inflects for gender, number, and person according to the features of this NP, which is thus clearly established as the subject. The accusative NP of the second slot of the tri-partite pattern is likewise seen to be an Object expansion of the verbal head of the Predicative P. In the light of the essential relationship such evidence shows there is between 6 and 9, to treat them as illustrating two different basic patterns is to introduce an element of redundancy into the grammar. The most adequate treatment appears, therefore, to be one which derives the Impersonal tri-partite pattern by means of a transformation on the bi-partite pattern. Such a treatment will not only make explicit the intuition about the relationship of 6 and 9 described above,

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8. Sentence 9 may also be translated
"Rama chose Kandan."
In this case, however, another verb teri meaning "select", which is homonymous with the verb in 6 and 9, is used.

but also avoid the necessity of setting up as basic, and of equal status with the oft-encountered bi-partite pattern, a minority pattern which serves to explain the behaviour of a very small irregular class of some six or seven verbs.

The discussion above has, for purposes of convenience, been confined to the behaviour of the verb teri. The other verbs which may replace teri in the tri-partite pattern are different from it in that they may not occur in actual sentences of the bi-partite pattern. That is, although there are sentences such as 9 corresponding to 6, there is no sentence

10. *piḷḷay oru poottal paal kaaṇṭaan.

corresponding to 7. This observation does not, however, affect the contention set out above. The base will, in the first instance, generate abstract bi-partite strings of the form underlying both sentences such as 9 and non-sentences such as 10. The transformational rule which converts these strings into the Impersonal tri-partite strings will apply optionally when the verb involved is teri, and obligatorily otherwise. Thus the generation of 6, 7 and 9 will be provided for, while the generation of 10 will be blocked.

An operation similar to that just described will be taken as explaining the divergence of the pattern illustrated by sentences like

11. saattirakkaaran $\left\{\begin{matrix}\text{-aal}\\ \text{-ukku}\end{matrix}\right\}$ etayum nampukiRa makka|in vaa|kkayay ka[[uppa[utta mu[iyum.

[[$\left\{\begin{matrix}\text{By}\\ \text{To}\end{matrix}\right\}$ the astrologer can control the lives of people who believe anything.]]

"The astrologer can control the lives of credulous people."

from the bi-partite pattern already set up. This pattern is also a bi-partite NP ^ Predicative P pattern, but it differs from the one already established in that a) the head of its NP either inflects for the dative case or takes the Instrumental or Agent postfix, and b) the head of its Predicative P takes one of three modal auxiliaries, iyal, kuu[-, or mu[i, meaning "can", which cannot inflect for gender, number and person. (These modals will later be labelled Potentive Modals.) In all other aspects, however, the relationship between NP and Predicative P in this pattern appears to be identical with the relationship between NP and Predicative P in the pattern already established, as is demonstrated by the essential relationship there is intuitively felt to be between 11 and

12. saattirikkaaran etayum nampukiRa makka|in vaa|kkayay ka[[uppa[uttuvaan.

"The astrologer will control the lives of credulous people.",

which illustrates the latter. All the differences, both formal and semantic, between 11 and 12 may be attributed to the fact that in the former the verb takes a Potentive Modal. They are, therefore, most adequately explained as surface changes wrought on strings of the bi-partite pattern previously established by a transformational rule which operates obligatorily when the verb in such strings takes a Potentive Modal.

A fourth set of sentences

13. kantan vayttiyar (aavaar).
"Kandan is a doctor." ,

14. murukan karuppu (aavaan).
"Murukan is dark." ,

and

15. ilaŋkay intiyaavukkut teRkiluḷḷa oru sinnat tiivu (aakum).
"Ceylon is a little island south of India."

introduce a different kind of problem. The pattern they illustrate appears superficially to have three slots. The first is filled by a NP whose head is in the nominative case. The second is filled by what will be termed a Complement. The Complement may be one of three elements: a NP which will be in the nominative case, and in number and gender concord with the preceding NP; an element which resembles an adjective in that it may take various

of the Intensifiers an adjective may take before it, but which is still unlike it in that its appearance before a noun as its qualifier is virtually always in a complex form which is best explained transformationally (Adjectives are introduced in the base itself as qualifiers of nouns.); or, finally, a dative NP followed by one of a very small number of nominal items like avasiyam "essential, necessity". The first of these three is illustrated by 13 and 15, the second by 14, and the third by

16. nooyaaḷikku ooyvu avasiyam (aakum).
"Rest is essential for the patient." ,

where the elements have been rearranged to give a more elegant reading.

The third slot in the pattern is filled by a Copulative verb aaka "be". This verb does not inflect for tense, but it does take certain limited verbal expansions. It also takes number, gender and person inflections depending on the features that characterize the NP in the first slot. This NP may, therefore, be taken as the subject of the sentence. Both in behaviour as well as in composition, the subject NP of this pattern is identical with the subject NP of the bi-partite pattern, any slight differences being explicable in surface terms. This fact provides the motivation for taking the various members of Predicative P in the bi-partite pattern previously established, and

the Complement ^ Expansion ^ Copulative Verb in the pattern under discussion as belonging to one major class which can occur in the environment of NP as subject. To use a more traditional terminology,[9] all these elements form a single large "focus class" which may appear in the environment of NP acting as subject, and the most economical analysis would be one which treats these various elements as a single major class in the first instance, and then, at a slightly lower level, distinguishes its members on the basis of their differences in terms of composition and syntactic behaviour. Such an analysis would reduce the pattern under discussion to the basic bi-partite pattern already set up.

Throughout the discussion above of the Copulative pattern (as it will be called), it had been assumed that it did contain three slots, the last of which was filled by a Copulative verb. The assumption requires justification because, as the brackets around the Copulative verb in 13 to 16 are intended to show, this verb is very often excluded (almost invariably in certain contexts in speech, and not very much less often in writing) without there being any resultant change in the meaning. The present work chooses to treat the absence of this element in

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9. The terminology is that employed in Wells (1947). The adoption of the terminology is not to be interpreted as an adoption of the methods used by Wells. Rather, it is to be seen as a device for highlighting the particular economy sought after.

many Copulative sentences as a surface feature explained by an optional deletion transformation on such strings as underlie 13 to 16. The choice is dictated by certain factors which militate strongly against the treatment of the Copulative pattern as a verbless NP ^ Complement pattern, separate from and of equal status to the basic bi-partite pattern previously established. The first factor is a general theoretical one, and relates to the fact that the criterion of frequency of occurrence may not legitimately be invoked by the grammar to exclude the Copulative verb from treatment. A grammar that is "data-oriented" may, if it confines itself to a sufficiently restricted corpus of material, succeed in excluding the verb, though as long as it does so, it will remain incomplete. A transformational grammar, however, denies itself this expedient, for it attempts to assign a structural description not merely to actually observed sentences within a restricted corpus, but to any sentence the user of the language is prepared to accept as grammatical.

There are other more specific factors which make it imperative to posit a Copulative verb. One is that, whereas in sentences such as 13 to 16 the exclusion of the Copulative verb is very much preferred to its retention, in certain other contexts, its exclusion results in stylistically awkward sentences, so that in such cases the preference is reversed. Such a context is illustrated by

17. raaman oru tiRamayuḷḷa poruḷiyalvaati maṭṭum alla, kuuriya aRivuḷḷa arasiyalvaatiyum aavaan.
"Rama is not only a skilled economist, he is also a shrewd politician." ,

which is derived by a Conjunction transformation.

A second such factor relates to the negative of Copulative sentences such as 13 to 16. Generally, in negative sentences, the Copulative verb, together with the gender, number and person inflections it is assigned by the Concord rule, is replaced by a negative particle, so that the negative of 13 would be

18. kantan vayttiyar alla.
"Kandan is not a doctor."

In certain instances, however, the negative particle may erase only the verb, and retain the concordial inflections it has been assigned, so that an alternative negative form of 13 would be

19. kantan vayttiyar allar.

If no Copulative verb is posited, the negative particle will provide the unique instance where the Concord rule assigns the automatic gender, number and person markers to a particle. No satisfactory retreat from this untenable and highly counter-intuitive position is possible unless the Copulative verb is posited as an actual element of strings of the Copulative pattern.

For instance, instead of positing a Copulative verb, it might be proposed that on the basis of its optional verbal inflections, the negative particle be treated not as a particle at all but as a verb. But, such an interpretation is as untenable and counter-intuitive as that rejected above. For one thing, it gives disproportionate weight to certain comparatively slight morphological resemblances between the particle and verbs, ignoring thus the radical differences there certainly are between them. For another, it will create a curious situation whereby the Copulative pattern will have no verb in the positive, but will have one in the negative.

Another factor which leads to the conclusion that a Copulative verb must be posited relates to the expansions taken by this verb. In 13, for example, the verb may take a Time expansion, to give

20. kantan ippo⌊utu oru vayttiyar (aavaar).
"Kandan is now a doctor."

This expansion may be retained whether the verb is subsequently deleted or not. Now this same expansion may be taken by other verbs in sentences of the bi-partite pattern, and in such instances, it would be developed from the node Predicative P. If the Copulative verb were not posited, the Time expansion would have to be developed differently for the two patterns. In Copulative sentences, it would have to be developed as a non-adverbial element of equal

status with the subject NP and the Complement, while in other sentences it would have to be developed as an adverbial expansion of the verb, of lower status than the subject NP.[10]

A fourth point in defence of the interpretation adopted relates to the verb aaka "become", which appears in

21. murukan paṇakkaaran aanaan.

"Murukan became rich."

The paradigm of this verb contains among others forms that are homophonous with the forms of the Copulative verb discussed above. Its resemblance to the latter extends beyond such phonological considerations, however, in that it too may take a subject NP and a Complement, which are identical in membership and behaviour with the subject NP and Complement respectively of the Copulative verb. While there are these significant similarities between the two verbs, there are also certain marked differences. The verb in 21 inflects for tense, may not be deleted, has great freedom as regards the expansions it may take, and behaves differently from the Copulative verb in a large number of the transformational rules. In all these features it resembles other regular verbs in Tamil. It is evident from what has been said that the patterns in which

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10. Chomsky (1965), p. 102, distinguishes between adverbials which are associated with verbs, and "Sentence Adverbials which form a 'pre-Sentence' unit in the underlying structure." The distinction is valid for Tamil too, and its full investigation may result in a revision of the point made, since Copulative sentences, more than any other, appear to be associated with "Sentence Adverbials".

these two verbs appear show great similarities as well as great differences. If a Copulative verb were not posited for the pattern illustrated by 13 to 20, the significant similarities between this pattern and that illustrated by 21 would not be explicitly indicated. If, on the other hand, it were posited, no feature of significance regarding the two patterns need be ignored. The base could indicate that there are two different patterns by positing two different verbs aaka, one for each pattern, and at the same time provide for their similarities by deriving these two verbs from a single major node which immediately dominates both of them. The term Copulative Verb could be reserved for the dominant node, and the verbs in 13 to 20, and 21, could be termed $V_{\text{Cop Iden}}$ (Copula Verb of Identity) and $V_{\text{Cop Act}}$ (Copula Verb of Activity) respectively.

Finally, there is the point relating to the embedding of sentences containing $V_{\text{Cop Iden}}$. When embedded in Qualifier position, for example, these sentences contain a form which phonologically resembles $V_{\text{Cop Iden}}$ very strongly. This is illustrated by

22. vayttiyaraana kantan nooyaaḷikku maruntu koṭuttaar.
"Kandan, who is a doctor, gave the patient (some) medicine." ,

where the underlined position is more adequately explained as

having being derived from $V_{\underline{\text{Cop Iden}}}$ as a result of the transformation which embedded 13 in Qualifier position in another sentence to give 22, than as an independent Adjectival Particle which, though resembling $V_{\underline{\text{Cop Iden}}}$ (while, moreover, being identical with the past participle form of the homophonous $V_{\underline{\text{Cop Act}}}$, which this verb would assume if the sentence to which it belonged were similarly embedded), is unrelated to it.[11]

In the light of the evidence presented above, there appears to be a very strong case indeed for positing a $V_{\underline{\text{Cop Iden}}}$.

The point just made applies equally to a verb in a different pattern which is illustrated by

23. pi⌊⌊aykku pasi (aakum).

[[hunger $\left\{\begin{matrix}\text{is}\\\text{will be}\end{matrix}\right\}$ to the child]]

"The child $\left\{\begin{matrix}\text{is}\\\text{will be}\end{matrix}\right\}$ hungry."

and

24. viya⌈naamil ku⌊appam (aakum).

[[Confusion $\left\{\begin{matrix}\text{is}\\\text{will be}\end{matrix}\right\}$ in Vietnam]]

"There $\left\{\begin{matrix}\text{is}\\\text{will be}\end{matrix}\right\}$ confusion in Vietnam."

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11. There are a few instances in which the form -aana, when in adjectival function, is not derivable from $V_{\underline{\text{Cop Iden}}}$. The explanation for this possibly relates to the analogical extension of the form, but will not here be discussed. The counter-examples referred to do not invalidate the general point made.

Before proceeding to indicate just how this is so, it is necessary to establish that the pattern illustrated by 23 and 24 is indeed different from that illustrated by 13 to 20, despite certain resemblances. The resemblances concern the verb used in the two sets of sentences. The verb in 23 and 24, aakum, is phonologically identical with $V_{\text{Cop Iden}}$, and, like $V_{\text{Cop Iden}}$, does not inflect for tense and is deletable. There are, however, certain differences between the two whose significance far outweighs that of their resemblances, and which justify their being treated as two different verbs operating in two different derived patterns. aakum in 23 and 24 belongs to a small class of verbs, whose other members, iru and ulla, may substitute for it without causing any change in the meaning, although the resulting sentences may at times be stylistically somewhat awkward. Thus, synonymous with 23 and 24 are

25. pillaykku pasi $\left\{\begin{matrix}\text{irukkiRatu}\\ \text{ullatu}\end{matrix}\right\}$.

and

26. viyaṭnaamil kuḷappam $\left\{\begin{matrix}\text{irukkiRatu}\\ \text{ullatu}\end{matrix}\right\}$.

respectively. $V_{\text{Cop Iden}}$ does not belong to this class (which may be termed Possessive), for iru and ulla may not substitute for it in sentences 13 to 17, and 20. Of the Possessive verbs iru is the freest, both with regard to its cooccurrence possibilities, and also because it is the only one of the three

to inflect for tense. The other two are quite limited in their cooccurrence possibilities. aaka is the most restricted because it can take only abstract NPs as subject. The three verbs are in gender, number and person concord with their subject NPs, which, in the light of what has been stated in the previous sentence, means that aaka invariably inflects for the feature, Third Person Singular Inanimate. The subject NP immediately precedes the verb in this pattern, a feature which a later transformational rule (T 32) will attend to. This means that all expansions taken by the Possessive verbs precede the subject NP. Where either ulla or aakum is involved, an obligatory expansion that must be taken is either a NP in the dative case (which is developed from Rec and signifies "Possessor"), or a NP in locative function. 23 and 25 illustrate the former, 24 and 26, the latter. None of the Possessive verbs may take a Complement as an expansion. All these factors indicate that aakum in 23 and 24 is distinct from $V_{Cop\ Iden}$, and that these sentences do in fact illustrate a different derived pattern from those containing $V_{Cop\ Iden}$.

It has already been noted that the Possessive verb aaka may be deleted. This happens very often. It is, nevertheless, necessary to posit a deletable Possessive verb aaka. The reasons for doing so are identical with some of the reasons given above for establishing that there is a $V_{Cop\ Iden}$, and will not be repeated here.

Once such a verb has been posited, it remains a simple matter to derive the pattern in which it appears from the bi-partite NP ^ Predicative P pattern already established. From Predicative P will be developed the Possessive verb aaka which will take either a Possessor or a Locative NP, apart from other optional expansions, or both. An optional low level transformational rule will delete the verb, leaving a verbless pattern.

The final group of sentences,

27. ituvaray santaappaṉattay anuppaatavarkaḷ ippoḷutaavatu anuppuvaarkaḷ ena nampukiRoom.
"(We) trust that all those who have not as yet paid their subscriptions will do so immediately." ,

28. ammaavukku tukkamaay irukkiRatu.
[[To mother is sadness]]
"Mother is sad." ,

and

29. piḷḷaykku pasikkiRatu.
[[To the child hungers]]
"The child is hungry."

illustrate three different kinds of subjectless pattern, all of which are, again, most economically derived by means of transformations operating on strings of the basic NP ^ Predicative P pattern. The present work will limit itself to the derivation

of 27 and 28 in this way.

To deal with the problem posed by 27, it has throughout been implied in the discussion above that the gender, number and person inflections of regularly inflecting verbs are most economically interpreted as surface features automatically assigned to them by the Concord rule according to the features characterizing their subject NPs. Such an interpretation is based on conclusive evidence of the kind provided by the results on the verbal inflections of any attempt to replace the subject NP with another NP characterized by a different combination of gender, number and person features from that characterizing the original subject. This evidence, by underlining the dependence of certain aspects of verbal behaviour on the subject NP, reveals, in terms of the problem under discussion, the essential bi-partiteness of the pattern in which regular verbs appear. A major function of the concordial inflections taken by the regular verb is then the indication and assertion of the bi-partiteness of the structure of the pattern in which it appears. In 27, the regular verb <u>nampu</u> takes the First Person Plural inflection. But, it does not have a subject NP. No revision of the position set out above is, however, called for by this fact, and indeed, contrary to expectation, sentences such as 27 provide more, rather than less, conclusive evidence in confirmation of that position; for, on the basis of the inflections taken by the verb in 27, it is possible to uniquely recover a subject NP and reconstruct a sentence by introducing it into 27,

which - and this is the point of significance - will be accepted as absolutely synonymous with the original sentence. The uniquely identified subject NP in 27 is the First Person Plural pronoun naam or naaŋkaḷ, and the sentence reconstructed with its aid is

30. naaŋkaḷ ituvaray santaappaɳattay anuppaatavarkaḷ ippoḷutaavatu anuppuvaarkaḷ ena nampukiRoom.

Such evidence clearly indicates that in sentences like 27, the verbal inflections have not in fact abdicated the major function attributed to them above. They continue, very decidedly, to indicate the dependency of the verb in some aspects of its behaviour on its subect NP; that is, they continue to assert the essential bi-partiteness of the pattern in which the verbs they attach themselves to appear. Nevertheless, sentences like 27 do not in fact contain a subject NP, and the most satisfactory explanation of these apparently irreconcilable phenomena appears to be one which interprets the verbal inflections in sentences like 27 as having in the first place been assigned to the verb on the basis of a close and definite relationship it had had with a First Person Plural subject which was subsequently deleted by an optional transformational rule. This rule, which would have borne on the string after the Concord rule had assigned its inflections, does not affect either the form or the functions of these inflections. In terms of this interpretation, the source sentence

for 27 is 30, which explains the equivalence these sentences have for the user of the language.

In the light of the preceding discussion, any attempt to explain the subjectlessness of 27 by setting up a mono-partite Predicative P pattern distinct from the bi-partite pattern illustrated by 30, or (in place of the bi-partite pattern) a mono-partite Predicative P pattern which may optionally select a subject NP, its choice resulting in sentences like 30, its non-choice in sentences like 29, has to be rejected as both uneconomical and falling short of descriptive adequacy. Such interpretations will not at all be able to account for the essential relationship between 27 and 30. They will, furthermore, be committed to interpreting the verbal inflections as base elements selected by the verbs in their own right, and, in consequence, will miss showing the essential function the inflections have in relating the verbs they are attached to to their subjects.

When the verb in the subjectless sentence produced by the optional deletion transformation just described inflects for the Third Person, a problem relating to recoverability arises. Chomsky has more than once[12] stressed the advisability of permitting only recoverable deletions. In 27, the element deleted was clearly a pronoun, and indeed, where the verb inflects for the First or Second Person, no problem regarding recoverability arises

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12. Chomsky (1964), Sec. 2.2; Chomsky (1965), Ch 3, fn. 1 (p.222), p. 144 f, p. 177 f.

since the complex of features assigned by the Concord rule to these verbs uniquely characterises the First or Second Person pronouns as the case may be, so that the choice of these elements is uniquely dictated. Where the verb in the subjectless sentence inflects for the Third Person, however, since the complex of features assigned to it is found to characterise large numbers of nominals, the problem arises as to which of these is to be selected as the deleted element. Facilitating the choice are certain significant factors. It is found that the deletion of a Third Person subject can take place only in sentences in which a Third Person pronoun can occur as subject. For example, Third Person pronouns do not normally occur as subjects of discourse-initiating sentences, for among their functions is one which extends across sentence boundaries, the function of resumptive concord which enables them to refer to objects or beings specified in a previous sentence. Likewise, subjectless sentences with verbs inflecting for the Third Person do not normally occur in discourse-initiating sentences, so that their subjectlessness is, in free variation with the Third Person pronoun, equally a device for signalling resumptive concord. The First and Second Person pronouns are not restricted in the same way as the Third Person pronoun for they can occur as subjects of discourse-initiating sentences. Significantly, discourse-initiating subjectless sentences whose verbs inflect for the First or Second Person are also to be found. Deleted subjects are, then, found to share more or less the same distribution as

pronouns, and this fact helps to establish conclusively that the subject element deleted by the transformation under discussion is invariably the pronoun, and solve the problem of unique recoverability raised above.

The subjectless pattern illustrated by 28 is of a very different kind from that discussed above. Equally adequate reasons exist for treating it as having been derived by a transformation from the basic bi-partite pattern established. These are highly complicated, however, and involve details which will be most intelligibly discussed at the low level point at which the transformational rules which delete the subject in such cases (pp. 325 to 336) are taken up. Their statement will, therefore, be reserved until that point.

The discussion above provides adequate grounds for setting up one basic sentence pattern for Tamil, a bi-partite NP ^ Predicative Phrase, any apparent divergences from it being interpreted as surface features introduced by the operation of transformational rules on it. To set up other basic patterns to accomodate these divergences would be to multiply entities beyond necessity.

The very first rewrite rule cannot develop Sentence into NP ^ Predicative P because Sentence includes certain optional elements which do not parallel either NP or Predicative P in structure, and whose difference from these elements must be indicated. Such elements, which will be termed <u>SE</u> (Sentence

Expansions), are illustrated by

31. meelum, avvarasaaŋkam piRa naaṭukaḷin uḷnaaṭṭu vivaraŋkaḷil talayiṭa villay.
"Moreover, that Government did not interfere in the internal affairs of foreign countries."

and

32. ellaa naaṭukaḷilum inta koṭiya poorukku etirppu kuuṭukiRataam.
"It is said that opposition to this cruel war is increasing in all countries." ,

where they are underlined. (Wherever possible below, the element illustrated by the sentences quoted will be underlined.) These elements are probably of higher status than either NP or Predicative P.[13] As 31 and 32 demonstrate, some of the SEs appear before the NP ^ Predicative P pattern taken as a whole, and some after it. The former will be labelled SE_1 , the latter SE_2 . Considering what has been said above, the first rule will have the form

33. Sent → (SE_1) S (SE_2) .

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13. Further detailed investigation is required before anything definite can be said about this matter. It will, however, be observed straightaway that some of the SEs could occur only in non-initial sentences in continuous discourse, so that they have some sort of function in indicating extra-sentential relationships. There are other factors besides this which are not treated by the present work. Footnote 10 above makes a reference to Sentence Adverbials,

The further development of S, which would normally have followed, must be postponed until a problem, whose solution as conceived by the writer involves a major departure from accepted transformational practice in the form of the introduction, at this point, of what will be termed a pre-base sub-component, is discussed. The problem relates to pairs of sentences like the following:

34. a) paḻaṉkaḻ veyyilil kaayntana.

"The fruits dried in the sun."

b) veelu paḻaṉkaḻay veyyilil kaayssinaan.

"Velu dried the fruits in the sun."

35. a) samuukam tiruntinatu.

"The society righted itself."

b) muRpookku naṭavaṭikkaykaḻ samuukattay tiruttina.

"The progressive measures set right the society."

36. a) kappal kaṭalil senRatu.

"The ship sailed on the sea."

b) maalumi kappalay kaṭalil seluttinaan.

"The sailor sailed the ship on the sea."

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13. (cont.) and the investigation of these is likely to throw up information which will be relevant to a more adequate characterisation of SEs. These details, which a complete grammar will have to account for, are ignored in the present work.

37. a) murukanuṭaya selvam perukinatu.

"Murukan's wealth increased."

b) murukan tanatu selvattay perukkinaan.

"Murukan increased his wealth."

38. a) eeḷayin kay niiṇṭatu.

"The beggar's hand stretched out."

b) eeḷay tanatu kayyay niiṭṭinaan.

"The beggar stretched out his hand."

39. a) kuuṭṭam naṭantatu.

"The meeting took place."

b) saṇkat talayvar kuuṭṭattay naṭattinaar.

"The President of the society conducted the meeting."

40. a) koṇṭaaṭṭam toṭaṇkiyatu.

"The ceremony commenced."

b) puusaari koṇṭaaṭṭattay toṭakkinaar.

"The priest started the ceremony."

41. a) taṇṇiir vayalil paayntatu.

"The water flowed in the field."

b) kamakkaaran vayalil taṇṇiir paayssinaan.

"The farmer watered the field."

In each case, there is both a clearly apprehended relationship of significance, and a clearly apprehended distinction, between the verb in a) and that in b). To some extent, the relationship between the verbs is to be defined phonologically, by the identity or near identity of their roots, and semantically, by a basic, though by no means complete, identity of their meaning. The difference between the verbs may be formally defined, in both syntactic and morphological (or morphophonemic) terms, and these formal distinctions are paralleled by a significant semantic distinction. The most obvious syntactic difference between the verbs is that in a) they are intransitive, whereas in b) they are transitive. The morphological differences are of various kinds. Confining the discussion to the examples cited above, the verbs in 34 b) and 41 b) differ from those corresponding to them in 34 a) and 41 a) respectively, by the fact that they take an extra suffix -ss-, which cause them to choose a different allomorph of the tense morpheme from that chosen by the verbs in a). Again, the verbs in 35 b), 37 b) and 40 b) differ from the verbs in the a) sentences corresponding to them by the fact that their roots have slightly variant phonological shapes. The verbs in 36 b) and 38 b) differ from those in 36 a) and 38 a) respectively, both in the shape of their roots, and in the shape of the tense morphemes they take. The verbs in 39 a) and b) differ on two counts: the latter takes an extra suffix -tt- , which causes it to choose different tense allomorphs from those chosen by the former. Such morphological

and morphophonemic variations are highly systematic, but no detailed discussion or formalization of them will be included in the present work.

Since morphological, or more particularly, inflectional, features have as one of their major functions the indication of syntactic processes,[14] the variations just described may be interpreted as being attendant on the major syntactic difference between the verbs, which, as so far stated, relates to transitivity. Proceeding further along the same lines, it appears to be possible to consider the verbs in a) and b) in each case as a single deep semantic unit, differentiated primarily by the fact that in a) they are intransitive and in b), transitive, all other differences, whether morphological, morphophonemic or semantic, following from this.

Such an interpretation, which would make the transitivity factor the formal crux of the matter in differentiating the verbs in a) and b) in each pair of sentences above, illuminates certain important aspects of the relationship and differences between the

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14. This point, which is basic to much transformational work, is most explicitly stated in a non-transformational work, Robins (1959): "The inflectional formations and the categories of which they are the exponents are relevant to the grammar of a language by virtue of the syntactic structures into which they enter, and the constructions and structural relations within constructions that they mark." And a little later, "morphological formations (more strictly, inflections) ... serve as markers of syntactic structures and groupings and relations within and between them."

verbs, without, however, exhausting their significance. This is made evident by a consideration of the following pairs of sentences:

42. a) nooyaḷi viḻuṉkinaan.

"The patient swallowed."

b) nooyaḷi kuḷisayay viḻuṉkinaan.

"The patient swallowed the pill."

43. a) siRumi inimayaaka paaṭinaaḷ.

"The little girl sang sweetly."

b) siRumi paaṭṭay inimayaaka paaṭinaaḷ.

"The little girl sang the song sweetly."

In each of these pairs of sentences, the verbs in a) and b) are distinguished from each other by the fact that the former is intransitive while the latter is transitive. Very clearly, however, the distinction is a far more trivial one than that illustrated by the verbs in 34 to 41, for its significance may be completely exhausted by a statement in terms of transitivity: in each pair of sentences 42 and 43, b), subjected to the simple transformation of Object Deletion, produces a). Beyond this, no point of significance remains to be made, for no further morphological, syntactic or semantic change accompanies the change described.

This shows that the transitivity factor is not per se the primary factor of significance in deciding the precise nature of the relationship between each pair of verbs in 34 to 41, and

provides good reason for supposing that it is in effect only the vehicle of a deeper and more significant factor, to the absence of which must be attributed the relative triviality of the relationship between the verbs in 42 and 43.[15] This more significant factor may be indicated initially in rather imprecise semantic terms. In each of the a) sentences in 38 to 41, the subject represents the immediate voluntary or involuntary performer of the action denoted by the verb. In each of the corresponding b) sentences, this subject is in object function, but it still represents in a sense the immediate performer of the action denoted by the verb; only now, the performer is, as it were, willed or caused to perform the action by the subject of the verb. The formal factors responsible for this semantic distinction can be stated in terms of a transformation which operates on a) in each case. The major changes this transformation effects on the source sentence are the addition of a new subject to it,[16] and the

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15. It is this consideration that makes Caldwell's translation of the labels tanvinay [[self-verb]] and piRavinay [[other-verb]], which the grammatical tradition uses to refer (though with no apparent consistency) to the distinction under discussion, as intransitive and transitive respectively, so unacceptable. (Caldwell (1875), p. 342.) The error, as the discussion above shows, is one not merely of translation but of interpretation. To Caldwell, too, transitivity appeared to be the crux of the matter, whereas, in fact, deeper and more significant factors were involved.

16. Strictly, a transformation cannot of itself introduce a new subject, for it it were to do so, it would exceed the bounds by which it is prevented from introducing an element that is of significance to the basic semantic interpretation of the transform. (See Katz and Postal (1964) on this point.) In fact, then, the transformation which accomplishes the "introduction" of the new subject will be an embedding transformation, one of the strings which it operates on already containing the new subject. The shorthand way of expressing this adopted above will, for purposes of convenience of discussion, not be altered.

conversion of the old subject into the object of the transform. Attendant on these changes are certain morphological and morpho-phonemic changes, which take place in the verb or its inflections. At times too, as in 37 and 38, the transform has to be obligatorily subjected to the Reflexivisation transformation to prevent stylistically unacceptable repetitions of nominals. Such an interpretation of the facts will accomodate one very significant dimension of the relationship between the verbs concerned which the earlier interpretation, with its preoccupation with transitivity, neglected, while at the same time accounting for all other aspects of it that that interpretation accounted for. The particular relationship here described may, since the term causal is required to refer to other aspects of verbal behaviour, be termed volition, the opposition being between volitive and involitive verbs.

What has, on the basis of the evidence provided by 34 to 41, been established as the relationship of volition between verbs is found, in other pairs of sentences containing different verbs, to be defined by slightly different conditions. Examples of such pairs of sentences are

44. a) pi||ay sooRu u<u>ɳ</u>ṯaan.

"The child ate rice."

b) ammaa pi||aykku sooRu uu<u>ṯṯ</u>inaa<u>l</u>.

"The mother fed the rice to the child."

45. a) kiraamavaasi pala aRputaŋkaḷay kaṇṭaan.

"The villager saw many wonders."

b) nakaravaasi kiraamavaasikku pala aRputaŋkaḷay kaaṭṭinaan.

"The city-dweller showed the villager many wonders."

46. a) raaman naṭantatay aRintaan.

"Rama got to know what happened."

b) murukan raamanukku naṭantatay aRivittaan.

"Murukan made known to Rama what had happened."

Intuitively, the relationship between the verb in a) and that in b) in each of these pairs of sentences is felt to be identical with the relationship of volition described above. The intuition is based on the facts that at least some of the verbs in each of these pairs of sentences differ from each other morphologically in the same way as the verbs in pairs of sentences like 34 to 41, and that they display the identical semantic distinction. (There are certain problems raised by the morphology of the pair of verbs in 46, but these will be postponed for a further discussion.) The volitive transformation does not, however, apply in just the manner described above to the sentences 44 a) to 46 a), for, in their case, the subject NP of the involitive verb is converted, not into the Object of the volitive, but into a dative expansion of it. This presents no problem, however, for it may be observed that this process takes place only when the involitive verb is already transitive. That

is to say, the two kinds of syntactic process described may be seen to be manifesting the identical relationship of volition in complementary distribution, the choice being automatically determined by whether the involitive is transitive or intransitive.

To summarise (with certain additions for clarification) the conclusions that have been emerging from the discussion above, evidence such as has been provided so far suggests that the most significant and descriptively adequate treatment of the relations and differences between the pairs of verbs illustrated by the material considered is in terms of a transformation (which will be named the transformation of volition) which will derive b) in each of the cases 34 to 41, and 44 to 46, from a). The transformation, which becomes operative on the choice of a dummy element vo in the base by the involitive verb, adds a new subject to the source sentence, and converts the subject NP of the involitive verb into its object, where this involitive verb is intransitive, or into a dative expansion of it, where it already is transitive. The later Concord rule will put the verb into number, gender and person concord with the new subject, while the morphophonemic rules will generally make various changes in, or additions to, the involitive verb when it takes vo , to give the corresponding volitive shape. Some of these changes will affect the shape of the tense markers taken by the verb.

Such a facile statement of the facts regarding the relationship of volition is, however, absolutely precluded by

evidence provided by further related material of the kind illustrated by

47. pillaykaL veyyilil kaayntaarkaL. [34 a)]
"The children got burned in the sun." ,

48. murukan aluvalakattukku senRaan. [36 a)]
"Murukan went to his office." ,

49. paampu aaTat toTaŋkinatu. [40 a)]
"The snake began to sway." ,

50. aaRu paayntatu. [41 a)]
"The river flowed." ,

and

51. raaman siŋkaLam aRintaan. [46 a)]
"Rama knew Sinhalese." ,

on the one hand, and

52. aasiriyar pillay eLutinatay tiruttinaar. [35 b)]
"The teacher corrected what the child had written." ,

53. pillay pattay muunRaal perukkinaan. [37 b)]
"The child multiplied ten by three." ,

54. raaman puttakattay niiTTinaar. [38 b)]
"Rama stretched out the book." ,

55. eḻuttaaḻarkaḻ oru saṇkattay <u>naṭattinaarkaḻ</u>. [39 b)]
"The writers ran a society." ,

56. kiraamaṇkaḻay aḻippatu ellaa makkaḻukku koopam uuṭṭinatu. [44 b)]
"The destruction of the villages angered all people."

and

57. raaman kaatalikku uḷḷa aasay ellaarukkum kaaṭṭinaar. [45 b)]
"Rama showed the love he had for his loved one to everyone." ,

on the other. The verb in each of these sentences is intuitively felt to be the same as a volitive or involitive verb used by a sentence in 34 to 41 or 44 to 46. (In each case above, the number of this sentence has been indicated within square brackets.) The intuition is based on the phonological identity of the verbs concerned, their morphological behaviour, and their meaning. In syntactic matters, too, there is much that is shared by the two verbs in each case, but in one matter there is a marked difference in behaviour. The difference relates to the fact that, on the one hand, 47 to 51 may not be subjected to the transformation of volition as described above, for if they are, they will yield ungrammatical sentences like

58. *murukan pi⌊⌊aykaɭay veyyilil kaayssinaan.
[[Murakan dried the children in the sun]],

59. *kantan murukanay aluvalakattukku seluttinaan.
[[Kandan ? Murukan to the office]],

and so on, while on the other, 52 to 57 may not be derived by means of the transformation, for what will have to be their source sentences,

60. *pi⌊⌊ay eɭutinatu tiruntinatu.
[[That which the child wrote corrected]],

61. *pattu muunRaal perukinatu.
[[Ten multiplied by three]],

and so on, are ungrammatical. That is to say, in the contexts defined by 47 to 57, the verbs do not enter into the system of opposition between volitive and involitive, although what are strongly apprehended to be these very same verbs are found to do so in the contexts defined by 34 to 41 and 44 to 46. These facts raise an immediate problem. The relationship of volition, as outlinad earlier, is realized as a two-term system, and as de Saussure has pointed out[17], in any system the terms define each other, determine each other's valeur. There can, therefore, be no one

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17. de Saussure(1959), Ch. IV

term volitive unless there is in contradistinction to it , the term involitive, and vice versa. Therefore, it is only with the aid of a special kind of statement that it will be possible to say that 34 a) and 47, for example, contain the one involitive verb kaay, or that 35 b) and 52 contain the one volitive verb tiru, for in 47, kaay has no corresponding volitive form, and in 52, tiru no corresponding involitive form. Theoretically, a transformational grammar can provide such a statement. In the case of the verbs in 34 a) and 47, for example, what the grammar can do to overcome the problem is to assert that these verbs are in fact a single unit, and then proceed to state in general terms the conditions under which the transformation of volition applies to sentences containing this unit, as distinct from the conditions under which it does not. The availability of the sentence 34 b) corresponding with 34 a) can then be simply accounted for by the fact that 34 a) satisfied the conditions on the transformation, while the non-availability of the sentence 58 corresponding with 47 can be equally simply accounted for by the fact that 47 did not satisfy these conditions. Similarly, in the case of the verbs in 35 b) and 52, the grammar can solve its problem as follows. First it will assert that these verbs are in fact one unit, derived in both instances by the operation of the transformation of volition on an underlying source sentence. This means that it will generate in the base sequences such as would underlie ungrammatical sentences like 60. It would,

however, prevent such sentences being generated at surface level by indicating that under certain conditions, such as are satisfied by the source sentence 35 a), the transformation of volition operates optionally, whereas under different conditions, such as are satisfied by 60, it operates obligatorily.

From the outline given above of the procedures the grammar is required to follow, it is clear that a sine qua non of its success in solving the problem at hand is that it should state the conditions on the operation of the transformation of volition (where it applies optionally, where it applies obligatorily, and where it cannot apply at all) in general terms. This, however, is completely beyond the grammar. A consideration of the examples cited above reveals that both selectional and strict sub-categorizational features[18] are involved among the conditions on the operation of the transformation. 58, for example, is ungrammatical because it violates the selectional restriction on the volitive verb kaayssu which prevents it from taking an animate object. The corresponding involitive verb kaay may, however, take an animate subject. Since the object of the volitive is derived from the subject of the involitive, this will mean that among the conditions

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18. Chomsky(1965) distinguishes between the rules which assign these two kinds of features as follows: strict sub-categorizational rules "sub-categorize a lexical category in terms of the frame of category symbols in which it appears.", while selectional rules "sub-categorize a lexical category in terms of the syntactic features that appear in specified positions in the sentence." p. 113.

on the transformation will be one which indicates that verbs like kaay may not take the dummy element vo and submit the sentences in which they appear to the transformation if they have animate subjects. Similarly, the involitive verb toŧa may not in the context defined by 49 choose vo, for the volitive verb corresponding with it is prohibited in terms of strict sub-categorizational restrictions from taking an infinitive sentence of the kind taken by toŧa in 49 as an expansion.

Neither such strict sub-categorizational restrictions nor such selectional restrictions lend themselves to the kind of generalization that the grammar is required to provide if it is to satisfy the demands made by the problem at hand. To deal first with the kind of problem posed by strict sub-categorizational restrictions, the inability of a volitive sentence to be derived from 49 will, when investigated further, reveal that in actual fact any two verbs which are related to each other in terms of volition take most of their expansions, excluding the object or dative expansion as the case may be, independently of each other. To put it differently, if any two volitively related verbs are treated as two separate unrelated verbs, it will be found that from the very highest rules of the base onwards they will be differentiated from each other, and the degree of their differentiation will be virtually the same as the degree of their differentiation from other unrelated verbs. This is so even where at a superficial

glance the expansions taken by the verb in a volitive sentence sentence appear to have been transferred to it from the corresponding involitive sentence, as is borne out by

62. raaman santooʃamaaka eḻumpinaar.
"Rama woke up happily."

and

63. kantan raamanay santooʃamaaka eḻuppinaan.
"Kandan woke Rama up happily."

The verbs (underlined twice) are clearly to be related to each other in terms of volition, but equally clearly they are to be interpreted as taking the Manner Adverbial expansion (underlined once) independently of each other, and there is no question of it having being transferred from 62, where it modifies Rama's action, to 63, where it modifies Kandan's. One way of trying to state the fact just illustrated (that volitive verbs take most of their expansions independently of the involitive verbs they correspond with) within the framework of the transformation already described is to require this transformation to be a generalized transformation which will erase any expansions other than the object or the dative phrase brought into it (as a subject) by the involitive verb, and assign the expansions brought into it by the dummy verb of the matrix sentence to the volitive verb derived by its means. Such a procedure, however, assumes that all volitive verbs take

the same expansions, an assumption that is not in the least supported by the facts, which are that each verb, whether volitive or not, behaves uniquely or almost uniquely with regard to the expansions it may take, so that no practicable statement of the immense variety of strict sub-categorizational restrictions can be envisaged.

The same is true of the selectional restrictions. Here again, the difficulty is that a different set of restrictions operates for each pair of volitively related verbs. To complicate matters further, even the statement of the restrictions on any one particular pair of such verbs is sometimes not possible in general terms. For instance, the inavailability of a grammatical string

64. *puttakam niiɳʈatu.
[[The book stretched out]]

from which 54 could have been derived by the transformation of volition, cannot be explained in terms of the general selectional restriction which prevents certain verbs from taking inanimate concrete subject nominals, because in 38 a) this restriction has been violated by the very same verb that is found in 64.

Further difficulties are to be found. There is, for example, the problem of indicating the selectional restrictions operating between the subject introduced by the transformation and the verb and its new object or dative nominal. In all such

instances, unique or well-nigh unique features of behaviour which are not generalizable have to be accounted for by the grammar.

It is evident from the discussion above that the problem cannot be solved within the framework of transformational grammars as at present conceived, for whatever ways such grammars theoretically have of solving the problem under discussion, they are in practice effectively blocked. As a result, the facts relating to the problem constitute irreconcilables from the point of view of the practical formulation of their statement by transformational grammars. In the circumstances, when the transformational grammarian is confronted with the problem, he is compelled to choose from among the facts those which appear to be susceptible to practical formulation. A statement which ignores any of the facts will, however, be thoroughly unsatisfactory. It makes a choice of a kind the language has no use for, and to the extent that it ignores any significant fact about the language falls short of descriptive adequacy. Moreover, considering what the aim of a transformational grammar is, such a statement would be uneconomical. A transformational grammar strives to describe and explain in explicit terms the "ideal speaker-hearer's intrinsic competence"[19] with regard to his language, and it does so by formalizing this competence in terms of a finite mechanism which is capable of generating, and assigning structural descriptions to, all and only the infinite sentences in

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19. Chomsky(1965), p. 4.

the language. The infinity of sentences may be handled in finite terms only, however, if all the basic relationships among them are observed, for then, and only then, can the elementary units which underlie the infinity of sentences in that they are the minimal units which, variously manipulated, will produce these sentences may be determined. The finite mechanism the grammar is will, then, consist of just these units, which may be considered primitives, and it is the establishment and organization of such a mechanism that helps to avoid the necessity of providing a new analysis for every new sentence, for merely listing or cataloguing the features of every new sentence in order to describe and explain it. If the mechanism ignores any significant relationship, it will contain two different and unrelated representations of what will in fact be just one primitive, and to that extent will be redundant and uneconomical. As Carlota Smith puts it, "to be really economical, a grammar must exploit structural similarities between sentences whereever possible."[20]

The failure of transformational grammars as at present conceived to account in a descriptively adequate way for both the irreconcilables that the problem at hand confronts them with is related to the more fundamental question of explanatory adequacy. Clearly the formal conditions on grammars that the theory at present sets out are not such as to permit the analyst to formalize the relationship of volition between certain verbs that

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20. Smith(1961), p. 342.

that the native user strongly apprehends. This means that the evaluation procedure which the theory incorporates and which provides the rationale for the statement of the formal conditions on grammars has in fact not taken sufficient account of certain important empirical facts that ought to have determined its construction. Clearly what is needed is a reformulation of the theory which would enable grammars constructed on its basis to satisfy the demands of explanatory adequacy. Below, an extremely tentative attempt will be made to define the nature of the limitation the theory suffers from, and this will be followed by an even more tentative proposal as to how the limitation may be overcome.[21]

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21. The writer wishes to stress the tentativeness of what follows very strongly, and recognises that both his criticism of the model and his amendation of it may be quite wrong. He does take courage in offering them for consideration, however, from the fact that both Chomsky and Lees, confronted with the identical problem in English, do not appear to be able to find an acceptable solution within the transformational model as they apply it. Chomsky discusses the problem in Chomsky(1965), on p. 189, and again on p. 214. One of the tentative solutions he offers, that "such relationships can be expressed by taking a lexical entry to be a Boolean function of features", the writer cannot quite pretend to understand. The other solutions, in terms of transitivity, or in terms of a "causative" transformation, suffer from the same limitations the solutions rejected above do, and in fact Chomsky offers them very tentatively indeed. Lees, in Lees(1960), p. 34, also thinks of the problem in terms of transitivity and intransitivity, and suggests that certain transformational rules will attend to the relationship. Although he indicates the place in the transformational component at which these rules will appear, he is unable to provide them. The tentativeness of all the proposals advanced with regard to to this problem appears to be very significant indeed.

The discussion above has revealed that certain pairs of verbs are related to each other by means of a very significant relationship which has been termed the relationship of volition. The problem is, however, that these volitively related verbs behave almost completely independently of each other from the highest level base rules, becoming more and more differentiated as the base develops. In fact so much of what the base as at present formulated has to say of such verbs as two separate verbs is valid that there is good reason for insisting that the differences between them are in fact deep differences. That is to say, the impossibility (discussed above) of formalizing the facts about volitively related verbs within the framework of transformational grammars as at present conceived is important not for its own sake, but because it is an indication of the fact that both the relationship and the differences between any pair of volitively related verbs are in fact deep structural matters. To try, therefore, to assert their relationship in the base, leaving it to a transformation to differentiate them would, apart from being impossible, deny deep status to the differences between the verbs, and not allow to each such verb the prerogative it in fact enjoys of behaving differently in the base from the verb it is related to.

The rejection of such a transformation allows both the differences between the verbs and their relationship to be treated as deep structural matters. The consideration, however, that

volitively related verbs are differentiated from each other from the very highest rules of the base on, makes it impossible to treat both the differences and relationship simultaneously. While this is so, the same consideration points the way out of the problem it creates. If two verbs are to be related in terms of volition, and if the base and the following transformational component can only differentiate them, then it appears reasonable to assume that the relationship has to be established before the verbs enter the base. This assumption, which would make the relationship between volitively related verbs a deeper matter than their differences without making the latter surface matters, while following from the practical problems of statement, also satisfies intuition. Its acceptance will, however, necessitate a reformulation of the theory. The framework hitherto used as a working scheme by transformationalists is summed up by Chomsky: "A grammar contains a syntactic component, a semantic component, and a phonological component. The latter two are purely interpretive .... The syntactic component consists of a base and transformational component ..... The base generates deep structures. A deep structure enters the semantic component and receives a semantic interpretation." [22] In the light of the problem under discussion, the shortcomings of this scheme appear to stem from the neglect of what might be referred to as "the layering of structure ". It envisages a uni-layered base related to a uni-layered transformational component. But, it is by no

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22. Chomsky (1965), p. 141.

means inconceivable that the notion of depth involves the notion of degrees of depth, and, indeed, the problem under discussion seems to make unavoidable a treatment in terms of degrees of depth. Of course, the ordering of rules within the base as at present formulated does perhaps extend some kind of recognition to the notion of degrees of depth: the higher the order, the deeper the elements. But clearly, some of the features relevant to the notion appear to defy formalization in terms of ordered rules within a uni-layered base, and to demand a different kind of formalization. The claim of the writer is that this kind of formalization must be in terms of a base which, while still illuminating the deep structure of a language, will be multi-layered. (The term "layer" is chosen because what might be a more suitable term "level" is already doing more than its fair share of work in linguistic analysis.) Of course, some of the most useful statements about a <u>particular</u> language are to be made within the higher layers of the deep structure, those which are in effect closest to the surface, for the deeper the analyst delves in formulating the base component, the further he will probably get from a particular language, and the more abstract and general will his statements become. In terms of practical limitations, too, there is a limit to the depth to which he can probe, deeper layers being beyond the scope of his discipline. While this is so, there is no justification for the unstated assumption made so far, that all elements of the deep structure relevant to the analysis of a particular

language belong to just one layer, or if not this, that all such elements may be handled simply in terms of an ordered but uni-layered base component related to a uni-layered transformational component.[23] The problem at hand seems, on the contrary, to indicate that the deep structure consists of separate layers of varying degrees of depth, and that though some of these layers may be further away than others from actual languages, they are equally essential to a proper understanding of them. In terms of the actual formulation of the grammar, the deeper layers would have to be ordered temporally before the less deep layers. That is to say, the acceptance of the arguments given above commits the analyst to some sort of pre-base sub-component.

While this appears to be inescapable, the problems involved in formulating such a pre-base sub-component are immense. Certain of these will be discussed when the rules of the sub-component are set out, but it might immediately be noted as a general point that some at least of the rules belonging to it must have the power of transformational rules. Such rules alone can indicate that two volitively related verbs are in fact one deep unit, connected with each other in terms of processes similar to those described on pages 91 to 94 above. The pre-base sub-component will also, of

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23. Much of what has been said above is very closely involved with the problems of the universals of language. To some extent, the assumptionsmade by the writer above necessitate a restatement of the function of the base in illuminating universals of language as Chomsky sees it (vide Chomsky (1965), especially pp. 117 and 141). No attempt will be made here to discuss the highly complicated problems involved. Footnote 40 below will, however, throw out certain hints as to the possible relationship of the proposal above to the question of universals.

course, be required to incorporate rules which observe the constraints on ordinary base rules. Possibly, the two kinds of rule bear the identical hierarchical relationship towards each other that the base and transformational rules as at present conceived, do. In the present work, however, no attempt will be made to subdivide the pre-base sub-component into two further sub-components, one paralleling the base, the other the transformational component, as these are at present conceived, although such a sub-division might, in the interests of simplicity, become necessary if other aspects of linguistic behaviour than volition are also seen to demand treatment in the pre-base sub-component.

The following set of rules is tentatively offered as illustrating the kind of sub-component proposed. The discussion of the basic sentence patterns earlier on had concluded with the establishment of a bipartite NP ^ Predicative P pattern as the basic sentence pattern of Tamil. The sentence, however, contains other elements besides these. The first rule above, 33, which will here be repeated as the first pre-base rule, had accounted for certain of these under the labels SE_1 and SE_2. There are, however, certain other elements of a different status from these which are developed from S, and which have to be kept distinct from the NP and the Predicative P. These are the dummy elements which enable the optional Question, Imperative and Emphatic transformations to take place. The first two of these may not be chosen simultaneously. The second pre-base rule, while developing S, will account for these factors.

PBR 1 Sent → (SE_1) S (SE_2)

PBR 2 S → $\left(\left\{\begin{matrix}Q\\Imp\end{matrix}\right\}\right)$ (Emp) NPhrasoid ^ Predicative Phrasoid

The choice of the somewhat outlandish terminology in PBR 2 has the express purpose of establishing at once the essential relationship between the elements of the pre-base sub-component and those of the base sub-component (this point will be returned to presently), and the separateness of the layers of analysis to which they belong. To expand on this, the terminological device adopted is intended to clearly relate the Predicative Phrasoid of the pre-base, for example, to the Predicative P of the base, while at the same time indicating that they are treated at two different levels of abstraction.

The next rule is a multi-purpose rule which indicates three different points of significance. The first is that Verboids as they are termed here, (these will be associated with various kinds of verb in the base), have to be divided into two classes at this level of abstraction depending on whether they enter into the relationship of volition or not. Those that do enter into the relationship do so optionally. The second point relates to the fact that the relationship of volition manifests itself differently according to whether the Verboid takes an Objectoid (what will be associated with Object in the base) or not. The rule prepares for the indication of the differences by introducing an element

Objectoid which may or may not be chosen, and in this way provides for the statement of the environmental conditions on the later rules. The third point relates to the expansions taken by the Verboids. In the base it will have to be indicated that any two volitively related verbs take their expansions independently of each other. In this layer, however, it is necessary to indicate only that the strings contain these expansions apart from the elements already mentioned. The rule will indicate this by introducing four optional nodes $\underline{Ex_1}$, $\underline{Ex_2}$, $\underline{Ex_3}$, and $\underline{Ex_4}$ in four different positions covering all possible expansions of Verboids. In the later rules, these nodes will be made use of to indicate certain positional points that will be of relevance to the ordering in the base/elements developed from Predicative P relative to each other.

PBR 3 Predicative Phrasoid → (Ex_1) (Ex_2) (Objectoid)

$$(Ex_3) \left\{ \begin{matrix} Verboid_1 & (Vol) \\ Verboid_2 & \end{matrix} \right\} (Ex_4)$$

The rules provided so far have all been of a basal character in that they have observed all the restrictions on phrase structure rules as these are understood. The next set of rules, however, are in effect transformational rules.

PBR 4

PBR 4.1 N Phrasoid → Recoid in env. ___ ^ X ^ Objectoid ^ Y ^ Verboid_1 ^ Vol ^ Z

PBR 4.2 N Phrasoid → Objectoid in env. ___ ^ X ^ Verboid_1 ^ Vol ^ Z

PBR 4.1 accounts for the change illustrated by 44 to 46, PBR 4.2 for that illustrated by 34 to 41. It might be objected at this point that these rules have left one of the major problems that motivated their formulation unsolved, for they appear to provide structural descriptions for such ungrammatical sentences as 58 to 61. The objection is not, however, a valid one. The point is that at this level of abstraction there is no place for the sub-categorizational restrictions which prevent the generation of such sentences, so that in terms of PBR 4.2, for example, the string underlying the grammatical sentence 47 must perforce generate the string underlying the ungrammatical sentence 58. Such strings as the latter must, however, subsequently pass through the base rules which will, as they do now, build in all the sub-categorizational restrictions. These rules will, at the more language-specific level at which they operate, effectively block the generation of actual terminal strings of the kind which would underlie such ungrammatical sentences as 58 to 61. What has to be stressed is that two different levels of abstraction are involved. At the

deeper level, a relationship will be demonstrated that at a less deep level is in many instances obscured by differences. The two components, working in conjunction, will make explicit both the essential relationship and the differences, while not generating terminal strings that would underlie ungrammatical sentences.

In the discussion above of the processes that take place when a volitive verb is derived from an involitive verb, it was mentioned that the conversion of the latter into the former is accompanied by the acquisition by it of a new subject NP. This fact is accounted for by the following rule, which too is transformational in effect.

PBR 5 Vol → N Phrasoid ^ Vo

Next, there is the permutation rule (also transformational in effect) which transfers the N Phrasoid introduced by PBR 5 to initial position in the pattern. Tamil has a comparatively free ordering of its elements, but in formulating both these and the base rules, it is important to indicate some kind of abstract underlying internal ordering.[24] The order chosen will be that preferred by the user in normal use. In terms of the basic pattern in the base rules, this will be NP ^ Predicative P, and the rule below will make the change that will enable the base rules to proceed on the basis of this ordering.

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24. Chomsky discusses the point in § 4.4 of Chapter 2 in Chomsky (1965).

PBR 6 $X \hat{} N\ Phrasoid \hat{} Vo \hat{} Y \rightarrow N\ Phrasoid \hat{} X \hat{} Vo \hat{} Y$

where $X \neq (SE_1) \left(\left\{\begin{matrix} Q \\ Imp \end{matrix}\right\}\right)$ (Emp)

It might be observed in passing that the changes effected by PBRs 4 to 6 might equally well have been accomplished by rules which conformed more closely to transformational rules as at present formulated. It would have been possible, for instance, to have treated these changes as occurring within a separate transformational sub-component. Or again, it would have been possible to have re-formulated the rules in terms of an embedding transformation which would have explained the N Phrasoid introduced by PBR 6 as having been brought into the transform from the matrix sentence. Such a reformulation of the rules would, if further evidence was to show that it were necessary, entail no great difficulty, but since, on the basis of the limited aspect of verbal behaviour here treated, there appears to be no particular motivation for doing so, the fairly simple method adopted here will not be altered.

PBRs 7.1 and 7.2 are also permutation rules. The first of them transfers the Objectoid derived by PBR 4.2 from a position preceding Ex_1 and Ex_2 to a position following them. This change will make possible the indication in the base of the fact that Object (with which Objectoid is to be associated) is preceded both by the expansions Implic, Time and so on (with which Ex_1 is to be associated) and by the expansions Cont and Topic (with which Ex_2 is to be associated). (See PSS 1 to 5)

PBR 7.2, while being a permutation rule, has an added function. As the elements are distributed at this point in the grammar, the Recoid derived by PBR 4.1 precedes Ex_1 and Ex_2. In the base, however, it will be necessary to indicate that Rec (which is to be associated with Recoid) follows classes such as Time, Implic and so on (which are to be associated with Ex_1). (See PSS 1 to 5, and 22.) PBR 7.2 prepares for this by transferring Recoid to a position following Ex_1.

It also prepares for the indication in the base of the position of Rec relative to the classes with which Ex_2 is to be associated. In this case, however, there is an added complication. The complication is that whereas certain of the classes to be associated with Ex_2, Cont and Topic follow Rec in the base, there are others like Destin which neither precede nor follow Rec, being developed together with it as an alternative sub-class of a single dominant class.(See PSS 5 and 22.) Moreover, Rec in the base will also cover elements that are not to be associated with Recoid. Since everyone of these elements is covered by Ex_2 in the pre-base, no simple permutational operation of the kind described above would suffice to account for all the facts. Thus PBR 7.2 will not only transfer Recoid to a position following Ex_1, it will also indicate that this element alternates with Ex_2. The base layer will later indicate that Rec will in fact precede some of the elements (Cont and Topic) associated with

$\underline{Ex_2}$, but alternate with certain other such elements (like Destin).

PBR 7

PBR 7.1 $X \hat{} \text{Objectoid} \hat{} Ex_1 \hat{} Ex_2 \hat{} Y \rightarrow X \hat{} Ex_1 \hat{} Ex_2 \hat{} \text{Objectoid} \hat{} Y$

PBR 7.2 $X \hat{} \text{Recoid} \hat{} Ex_1 \hat{} Ex_2 \hat{} Y \rightarrow X \hat{} Ex_1 \hat{} \left\{ \begin{matrix} Ex_2 \\ \text{Recoid} \end{matrix} \right\} \hat{} Y$

The major points regarding the relationship of volition have now been made, and it remains for the base sub-component to commence its operations, and to differentiate the verbal elements which had been related to each other by the pre-base. The transition from the pre-base to the base is accomplished by the following rules.

PBR 8 $N \text{ Phrasoid} \rightarrow N\ P$

PBR 9 $(Ex_1) \left(\left\{ \begin{matrix} Ex_2 \\ \text{Recoid} \end{matrix} \right\} \right) (\text{Objectoid})\ (Ex_3) \left\{ \begin{matrix} \text{Verboid}_1\ (\text{Vo}) \\ \text{Verboid}_2 \end{matrix} \right\}$

$(Ex_4) \rightarrow \text{Predicative P}$

The first of these rules appears, superficially, to be concerned with a mere terminological matter, the substitution of the terminology of the base for that of the pre-base. Its full implications will, however, emerge from the discussion of PBR 9 below. This last mentioned rule has as its purpose the indication of the fact that all elements developed out of Predicative Phrasoid in the pre-base, together with certain other elements, belong to the Predicative P of the base. It should be pointed out here that not all the combinations of nodes which the rule superficially appears to allow will in fact be possible, for the preceding rules will dictate just the combinations that are possible and block the rest. Thus the rules will, for instance, ensure that there can be no combination of elements which includes Recoid but excludes Objectoid and Vo.

The manner in which PBR 9 achieves its purpose - by collapsing into one major base node various nodes, both those linked together by a concatenation sign and those listed one under another as alternatives within braces - carries certain implications of the highest significance which make necessary a justification of the procedure followed.

The problem is that while PBR 9 is by no means an ordinary PS rule, the restriction on collapsing that PS rules are required to observe appears to be equally applicable to it. Bach has stated the restrictions as follows: PS rules are required

to be "expansion rules, that is, rules which replace a single symbol by one or more symbols (one-many rules)."[25] This is the vital condition on analysability in transformational grammars, for it ensures that any two successive symbols in a line of derivation are linked in terms of the relationship "is a", and this in turn ensures that given any sentence a unique tree of derivation can always be constructed which can be assigned as a structural description to it. Elsewhere[26], Bach has pointed out that collapsing rules do not necessarily interfere with the construction of such a tree. He says, "it is only if neither side of a PS rule is restricted to a single element that derivations appear for which it is impossible to construct a unique tree", and proceeds from there to the statement that "perhaps the proper restrictions on PS rules should be that they either change one element to one or more elements, or one or more to a single element, prohibiting only those which would replace several elements by different ones." PBR 9 observes these revised restrictions. Nevertheless, in this case uniqueness of derivation is not guaranteed, for the single node into which PBR 9 collapses its various elements is subsequently redeveloped in normal fashion in the base rules. This inevitably produces derivational trees of the following kind,

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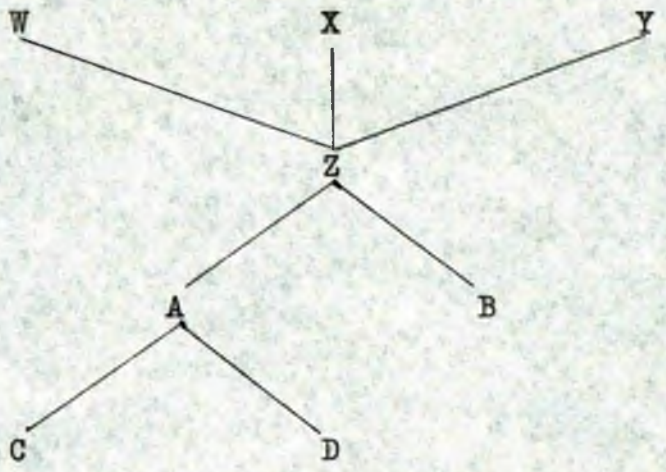
25. Bach(1964a), p. 35.
26. Bach(1964b).

65.



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where it is impossible to say whether what in the lower part of the tree is a D, for example, was originally a W, an X, or a Y. The way out of the problem is provided by the terminological device referred to earlier (p. 111), and this in fact is its most significant function. The elements in the pre-base are referred to by a modification of the label which will be applied to them in the base. The convention is undoubtedly a very artificial one to which many objections especially of a mathematical nature can admittedly be raised. Nevertheless, it will effectively ensure that uniqueness of derivation is not lost in this particular case, and until such time as a convention that both meets these objections and satisfies the empirical demands of adequacy is proposed, it will have to serve the purposes of the grammar.

While the terminological device is very important in this matter, often other formal factors lend their support to it. If, for example, a verb in the base is indicated as taking an object, this object could be traced back by means of the termino-

logical convention proposed to an Objectoid in the pre-base. At this point, other formal factors will operate to indicate precisely which of the two Objectoids in the pre-base it goes back to. If the verb concerned does not take vo(this will be introduced as an optional element in the base), clearly the object is derived from the Objectoid introduced by PBR 3. If it does take vo, whether the object is derived from the Objectoid introduced by PBR 3 or from the Objectoid introduced by PBR 4.2 will be determined by whether it takes also a Rec (traceable in this case to Recipoid) or not.

The changes advocated above will have their repercussions on the lexicon. It has been stated that vo will be developed in the base rules as an optional element which will be assigned as a feature to verbs. Its assignment must not, however, be random, for it is essential to demonstrate that while an involitive verb and the volitive verb corresponding with it are treated as separate items in the base, they will still bear that essential relationship towards each other which the pre-base had accounted for. In order that this may be done, the lexicon will, where it lists verbs which enter into the relationship of volition, be altered as follows: every volitively related pair of verbs will not in the first instance be listed separately, but as a single entry. The initial entry will generally have the shape of the root. This entry will be shown to cover two sub-entries, the first having the shape

of the involitive form, the second, the shape of the volitive. (This order is advisable since the volitive is derived from the involitive.) The involitive entry will be marked with the feature [-vo], the volitive entry with the feature [+vo]. The kind of entry proposed is illustrated by

66. sel
- sel [+V, ..., -vo, ...] "go"
- seluttu[27] [+V, ..., +vo, ...] "ride, drive.."

In the present work, the proposal outlined is applied to only one limited aspect of verbal behaviour. There is a possibility, however, that there are other aspects of the language, too, which demand treatment in terms of a pre-base sub-component. Among such are certain derivational processes, problems of synonymity, the problem of homonymous and semantically closely related items belonging to different parts of speech, and so on. These points will not be investigated here.

Whether confined in application to one aspect of linguistic behaviour or not, the proposal will undoubtedly invite many objections. Some of these have already been discussed, but there still remain others such as relate to problems of the kind raised by the questions, How many pre-base components are to be allowed?, What will be their hierarchical relationship towards each other?, How will these be established and made explicit?, and so on.

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27. It must be remembered that although a form like seluttu is provided in the lexicon, it is probably in fact the product of a morphophonemic rule which indicates that sel ^ vo → seluttu.

These are none of them questions to which answers can be made with overmuch confidence, although it is more than likely that in each case there will be sound empirical reasons for making decisions. No attempt to answer them can, however, be possibly made in a work of the present kind, and so no answers will be attempted. Whatever the implications of the questions, they do not appear to invalidate the arguments advanced above.

It might finally be pointed out in support of the proposal that there is probably a universal of language involved in the problem. Possibly the universal is substantive, for English has the identical problem, and so, probably, has the Indo-Iranian language, Simhalese. Even if it were not so, however, it certainly does appear that a formal universal is involved, for it does not seem an unreasonable assumption to make that the concept of degrees of depth is relevant to language as a human activity. The fact that the problem probably involves a universal is significant for the reason that the question of explanatory adequacy, which the discussion above has very much been concerned with, is (as has been pointed out in the Introduction above) so closely tied up with the attempt to develop a hypothesis about universals, about language as a human activity.

The further development of the base rules has to be postponed once more until a final problem, which has been referred to earlier in passing (p. 93), is discussed. The problem, which relates

to the shape of the volitive particle in 46 b), and in sentences like

67. eḻuttaaḷar saṉkam oru putu saṉsikayay piRappittirukkiRatu.
"The Writers' Society has issued a new journal."

is diachronic in origin. Apparently the forms -vi- (used in 46 b)), -ppi-(used in 67), and -pi- (not illustrated) had been allomorphs of a single morpheme which had probably been introduced later than the other devices (described above) for signalling volition.[28] It is probable, too, that the original function of this morpheme had been different from that of the volitive devices (this function may be called causal), but that at some time in the development of the language it had begun to take on in the case of certain verbs which lacked a volitive form, the volitive function.[29] The result of this change was that what superficially appeared to be one unit had in fact become two units, one discharging a causal function, the other, together with various other devices, a volitive function, and this situation has in fact continued into present-day Tamil. In both traditional and contemporary interpretations of the situation, however, this important differentiation of function has not been adequately appreciated, and much confusion is evident in its treatment.

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28. This is implied by Subrahmanya Sastri when, discussing the various volitive and causal forms, he says, "Again the forms with -vi- or -pi- are not found as far as I see in the Sangam works earlier than the KuRal." (Subrahmanya Sastri(1934), p. 153.)

29. The point is discussed by Thananjeyarajasingham in the opening section of his chapter, Verbs. (Thananjeyarajasingham(1961))

To a large extent perhaps the confusion in both traditional and contemporary works is due to the fact that the criteria applied to the situation are semantic-cum-taxonomic. Leaving aside the shortcomings of the tradition in this matter[30], it might be pointed out that Subrahmanya Sastri, among more modern analysts, is led by his criteria to ignore the very real difference there is between the causal and the volitive.[31] The same semantic criteria lead another contemporary analyst, Varatharajan, to a more extreme position, whereby he lumps together a variety of volitive and causal constructions under one category without indicating any of the basic differences there are among them.[32] Two other contemporary linguists, Siinivaasan[33] and Thananjeyarajasingham[34], allow their intuition about the matter to prevail sufficiently to cause them to avoid the errors the other analysts had fallen into. They make

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30. That the tradition is lacking in this matter is clear from Subrahmanya Sastri's discussion of its interpretations in Subrahmanya Sastri(1934), § 3.22221. It is evident from what he says that firstly, there is no assurance that the various traditional grammarians were all referring to the same categories in their analyses, and secondly, these grammarians differ as to whether the causal and the volitive are one or two categories.

31. Subrahmanya Sastri(1934), § 3.22221.

32. Varatharajan(1947), Chapter entitled "Vinayvakay", pp. 252-281.

33. Siinivaasan(1960), Chapter entitled "Tanvinay, PiRavinay, Iyakkuvinay", pp. 200-204.

34. Thananjeyarajasingham(1961).

a distinction between the volitive and the causal functions, but are unable to demarcate the two in formal terms, and the former, in fact, without clearly setting up two distinct units, states that the one causal form has two functions.[35]

The position that will be adopted in the present work is that, whatever the diachrony of the problem, there are two homophonous units -vi-~-pi-~-ppi- , one of which, together with certain other devices, discharges a volitive function, the other, a causal function.[36] The former is illustrated by 46 b) and 67, the latter by

68. aṉṉan tampiyay takappanayk koṇṭu eesuvittaan.
"The elder brother got the younger brother scolded by (his) father."

The distinction between the two is based on the fact that whereas sentences whose verbs take the volitive particle are derived in the pre-base in the manner described above, sentences whose verbs take the causal particle are derived by means of an embedding transformation which embeds one sentence in Object position in another, matrix, sentence, whose verb is sey "do". (Details regarding the transformation are provided in the appropriate place, and here only such facts as are essential for clarifying the point under discussion will be provided.) 68 would, in terms of

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35. Siinivasan (1960), p. 203.
36. This is not the only kind of causal construction in the language. Details regarding the various other kinds of causal construction will be provided in the discussion of the causal transformations (Ts 5, 6, and 7).

this interpretation, have been derived by embedding

69. takappan tampiyay eesinaan.

"(The) father scolded the younger brother."

in Object position in

70. aṇṇan Object seytaan.

"The elder brother did Object."

The validity of this distinction is borne out by the fact that certain points about causal sentences can only be explained in terms of such an embedding transformation. To elaborate on this, the expanded version of 68,

71. aṇṇan tampiyay murukanukku mun takappanayk koṇṭu eesuvittaan.,

"The elder brother got the younger brother scolded by (his) father before Murukan."

is multiply ambiguous,[37] having among its readings at least two which can be explained only by a transformation of the kind described. In one of its readings, the Time phrase murukanukku mun introduced into 68 modifies the action of the elder brother, while in another reading, it modifies the action of the father. The embedding transformation described above easily accomodates this ambiguity by showing that the reading depends on whether the Time phrase was brought into 71 from the matrix or from the embedded

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37. Often, it will be possible to dissipate some of the ambiguity by rearranging the elements, and (in speech) by varying the intonation. No complete success can, however, be achieved in this endeavour

sentence. In the first of the two readings mentioned, it is the verb in the matrix sentence 70 which takes the expansion, giving

72. aɳɳan Object murukanukku mun seytaan.
"The elder brother did Object before Murukan." ,

while in the second of them, it is the verb in the embedded sentence 69 which does so, giving

73. takappan murukanukku mun tampiyay eesinaan.
"(The) father scolded the younger brother before Murukan."

While such a transformation is called for to explain causal sentences with the particle -vi-, volitive sentences with the particle -vi- can be explained best in the manner already described. Certainly such sentences do not confront the analyst with problems of ambiguity of the kind just discussed, as is demonstrated by the fact that if 46 b) is expanded to

74. murukan raamanukku naṯantatay uratta kuralil aRivittaan.
"In a loud voice, Murukan announced to Rama what had happened." ,

it will be very clear that the expansion modifies the action of the subject. That is to say, expansions taken by verbs in such sentences can have but one source.

The further development of the base rules may now be

resumed. These rules will proceed to rewrite the two elements NP and Predicative B produced by the pre-base rules, beginning with the latter. The first few rules will attend to two points. One relates to the sub-classification of verbs into various kinds such as Impersonal verbs, Possessive verbs and so on. These have already been discussed (in the investigation of the basic sentence patterns) and there will be no further elaboration on them here. It must be pointed out, however, that not all the sub-classes referred to in that discussion will be explicitly set up by the rules below, some being attended to by the lexicon. The second point relates to the various expansions that modify these verbs. Some, like Object, are considered as being more immediate modifiers of individual verbs than others in that they appear intuitively to be very closely tied to these verbs. Others are less immediate modifiers in that they are intuitively felt to be able to modify not merely individual verbs but whole verbal groups consisting of a verb plus any one or more of the more immediate modifiers referred to above. Such a modifier is the Adverbial, Substit (PSS 2 and 29), illustrated by

75. murukan selvam peRuvataRkaaka aṉṉanay eemaaRRinaan.
"Murukan tricked his brother in order to obtain wealth."

The third kind of expansion is felt to be even less immediate and more general than the second, having the power to modify in their

entirety verbal phrases containing a verbal head and both kinds of expansion referred to. A mark of their generality is that, subject to certain restrictions, they may occur with any of the sub-classes of verbs developed, unlike, for example, the expansions in the first group referred to. The Loc expansion illustrated in

76. teeyilays seṭi mattiya malay naaṭukaḷil nanRaaka vaḷarum.
"The tea bush grows well in the central hill country."

is one such general expansion. The rules will indicate these differences among the three kinds of expansion by the manner in which they order their development: the most general expansions (referred to in the discussions below as Class I expansions) will be developed first, then the second kind mentioned (Class II), and finally, the most particular expansions (Class III). There are three major classes of Class I expansions, Implic (Implicational), Time and Loc (Locative), all of which precede the verbal phrase in the order preferred in usage. Of the four classes of Class II expansions, two, Substit (Substitutive) and Manner, precede the verbal phrase, and two, Dyn (Dynamicity) and Modif (Modifier), follow it. Modif covers all those elements which modify the verb in terms of aspect, mood (excluding the Imperative and the Interrogative), tense and voice. Dyn includes two major sub-elements, vo, brought over from the pre-base, and an element labelled c. This element is of significance for the Indirect Causal 1 transformation (T 6), details regarding

which will be provided in the appropriate place. Here it suffices to state only that certain verbs are not eligible to occur in sentences embedded by the Indirect Causal 1 transformation, and that the function of c is to indicate just which verbs are eligible to do so. These will be the verbs to which c is assigned as a feature in the lexicon.

In the case of many volitively related pairs of verbs, c, it will be found, can be chosen only by the volitive. That is to say, in these cases the choice of c depends on the prior choice of vo. Thus, the volitive verb in

77. meelaaḷin aniitikaḷ paṇiyaaḷarkaḷay kiḷappina.
"The master's injustices stirred the servants."

may take c, thereby subjecting the sentence to embedding by the Indirect Causal 1 transformation, a possible sentence resulting from the process (after it has undergone certain other optional changes) being

78. manita matippay paRRi uḷḷa taṉkaḷuṭaya puttuṇarssi paṇiyaaḷarkaḷay kiḷappuvittatu.
"The new sense they had of human dignity caused the servants to be stirred."

On the other hand, the involitive verb from which the volitive verb in 77 is derived cannot take c, so that

79. paɳiyaaḷarkaḷ kiḷampinaarkaḷ.

"The servants were aroused." ,

in which this verb appears, may not be so subjected to the transformation. No general rule barring involitives from taking c can, however, be given, for there are certain pairs of volitively related verbs like uyar "rise" uyarttu "raise", seer "come together" seerttu "bring together", kuRay "reduce" kuRayttu "reduce", kaaṇ "see" kaaṭṭu "show", and uṇ "eat" uuṭṭu "feed", both members of which can take c. This is borne out by examples like the following, which use the causative forms of the last pair of verbs listed above.

80. ammaa piḷḷaykku sooRu uṇpittaaḷ.

"The mother got the child fed rice."

81. , makanin viiṇselavu takappanukku koopam uuṭṭuvittatu.

"The son's wasteful spending caused his father to become angry."

PS 1 Predicative P → (Implic) (Time) (Loc) Verb P

PS 2 Verb P → (Substit) (Manner) Vrb P (Dyn) (Modif)

PS 3 Dyn → (vo) (c)

After PS 4 distinguishes between Copulative and non-Copulative kinds of verb phrase, PS 5 will indicate that there are

two major kinds of non-Copulative verb, the Impersonal and the non-Impersonal. (The reasons for the classification of verbs and verb phrases carried out by the next set of rules have already been provided in the discussion of the basic sentence patterns and will not be repeated here.) Impersonal and non-Impersonal verbs, despite their differences (indicated only partly in the discussion of the basic sentence patterns; other major points of difference will emerge from various of the base and transformational rules below), share in common certain of the Class III expansions. (The lexicon will indicate just which of them are shared.) The non-Impersonal class consists of two sub-classes, Possessive and non-Possessive.

The Copulative verb phrase will be developed into a Complement followed by one of two sub-classes, $V_{\underline{Cop\ Iden}}$ and $V_{\underline{Cop\ Act}}$, except where vo is chosen. When vo is chosen, the first of these two sub-classes may not appear. Furthermore, when vo is chosen, the Complement (which will be labelled Comp in the rule) will be preceded by an Object, which, as will be recalled, has been derived in the pre-base layer from the subject of the corresponding involitive verb. Each of the sub-classes $V_{\underline{Cop\ Iden}}$ and $V_{\underline{Cop\ Act}}$ consists of one verb, the two being homonymous.

PS 4 $\quad$ Vrb P $\rightarrow$ $\left\{\begin{matrix} VP \\ VP_{Cop} \end{matrix}\right\}$

PS 5 $\quad$ VP $\rightarrow$ (Recip) (Cont) (Topic) (Object) $\left\{\begin{matrix} Vb_{Imp} \\ Verb \end{matrix}\right\}$

PS 6 Verb → $\left\{ \begin{matrix} V \\ V_{Pos} \end{matrix} \right\}$

PS 7

PS 7.1 VP_{Cop} → Object ^ Comp ^ $V_{Cop\ Act}$ in env. ____ ^ vo

PS 7.2 VP_{Cop} → Comp ^ $\left\{ \begin{matrix} V_{Cop\ Iden} \\ V_{Cop\ Act} \end{matrix} \right\}$

Most of the expansions introduced by PSS 1 to 7 are developed either optionally or obligatorily into phrases whose heads are NPs. These, therefore, demand treatment prior to the development of NP, and the rules will now proceed to deal with them. These rules do not generally appear to demand any particular ordering relative to each other, and, therefore, the ordering assumed will, except in a few instances which will be specified, be a mechanical temporal one based on the order in which the expansions were introduced in the rules.

Since Implic is not one of those elements which must be developed before NP, the Time node will be dealt with first. Time is developed into four elements, any one or more of which may be selected by the verb subject to certain restrictions which it will be the business of the lexicon and the transformational rules to specify. If more than one is selected, they will appear concatenated to each other, generally in the order specified in the rule.

PS 8 Time → (Partic) (Perspec) (T_{AD}) (Measure)

The first of the four elements, Partic (Particular), is developed into a NP followed by either a dative or a locative case inflection, the choice generally depending on the noun head developed from the NP.

82. vaakkaḷital 6 maṇikku muṭiyum.
"Polling ends at 6 o'clock."

and

83. kaliyaaṇa koṇṭaaṭṭam supamukuurttattil toṭaṇkum.
"The wedding ceremony will commence at an auspicious time."

illustrate the two alternatives in turn. (The case endings are underlined.) In speech, some of the nouns which occur in Partic position may, rarely, choose the case ending optionally, as is illustrated by the somewhat awkward alternative form of 82,

84. vaakaḷital 6 maṇi muṭiyum.

PS 9 Partic → NP ^ $\left(\left\{\begin{matrix}\text{dat.c}\\ \text{loc.c}\end{matrix}\right\}\right)$

A point of relevance both to PS 9 and to the rules below dealing with the sub-classes of Time is that the NP developed from it in fact consists of a limited number of noun heads or of a pronoun head, plus other optional elements taken by nouns and pronouns. The

noun heads which occur in this position may be classified as Time nouns. While these Time nouns generally appear in Time Adverbial function, they also behave like any other noun, as is illustrated by

85. siinarkaḷ eppoḷutum 1945ay maRakka maaṯṯaarkaḷ.
"The Chinese will never forget 1945." ,

where the Time noun is in Object position. These facts will be accounted for when NP is being developed by what are in effect local transformational rules.[38] In the first instance, when NP has been developed from any Time sub-class, it will be rewritten merely as Noun (See PS 63). Then, when N, which has been developed from Noun, is being assigned its features, if its line of derivation can be traced back to Time, it will obligatorily be assigned the feature [+Temp]. In other instances, N will not be so treated.

The second of the elements developed from Time, Perspec (Perspective), is more complex than the first, being developed into four alternative sub-classes. The first of these, Pre Act (Previous

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38. Chomsky defines a local transformation as follows: "By a local transformation (with respect to A) I mean one that affects only a sub-string dominated by the single category symbol A." (Chomsky (1965), Chapter 2, fn. 18, p. 215.) He goes on to say that there is "some reason to suspect that it might be appropriate to intersperse certain local transformations among the rewriting rules of the base." Certainly, the treatment of Time Adverbials is made much more satisfactory by their means. They do help, for example, to avoid the unsatisfactory position Lees assumes when he treats Time Nouns as an Adverbial class separate from other nouns. See Lees(1960c), p. 13f.

Action), is developed into the Time postfix mun "before" preceded by either a sentence or a NP, and signifies that the action or event designated by the element before the postfix precedes in time the action designated by the verb modified. Details regarding the embedding of a sentence before mun will be provided when the transformation attending to it (T 14) is discussed. An example of a sentence so produced is

86. pirittaaniyarkaḷ ilaṇkaykku varum mun, ollaantarkaḷ aṇkee aaṭsiseytiruntaarkaḷ.
"Before the British arrived in Ceylon, the Dutch were ruling there."

The comments made above about NPs developed from a Time sub-class hold good for the NP preceding mun. Examples like

87. marapu vaḷakkinpaṭi naṭakkiRavarkaḷ tamakkayṟku mun taṇkassikku kaliyaaṇaṇ seyya viṭa maaṭṭaarkaḷ.
"Those who go by tradition will not allow a younger sister to get married before (her) elder sister." ,

where the postfix is preceded by the animate noun tamakkay "elder sister" in the dative case, do not contradict this claim, for they are in fact derived by means of a transformation from sentences which had initially been derived by embedding a sentence before the postfix. Thus 87, for example, has in fact been derived directly from

88. marapu vaḻakkinpaṭi naṭakkiRavarkaḷ tamakkay kaḻiyaaṇaṃ seyyum mun, taṇkassikku kaliyaaṇaṃ seyya viṭa maaṭṭaarkaḷ. "Those who go by tradition will not allow a younger sister to get married before her elder sister gets married." ,

and the apparent counter example it contains will be seen to have no significance, being entirely a surface matter.

The NP which at base level is shown as preceding mun will be assigned a dative case marker by the automatic Case Assignment rule (T 62).

The second and third of the sub-classes of Perspec, Sim Act (Simultaneous Action) and Sub Act (Subsequent Action), are each of them developed into two further sub-classes. Most of the details about these will be provided during the discussion of the transformational rules based on these elements (Ts 15 to 18). Here it must be indicated that one of the sub-classes of Sub Act, Sub A_1, is itself further developed in much the same way as Pre Act, the primary difference being that Sub A_1 is developed into three alternative postfixes, two of which, pin and piRaku meaning "after", are preceded either by a NP or by S, and the third, uṭanee meaning "as soon as", is preceded by S. In these positions too NP is built on a Time noun head, any apparent departures from this being explicable in surface terms. The NP will be assigned a dative case marker by the automatic Case Assignment rule (T 62). Illustrating

the various sub-classes just discussed are

89. aṉṉiyarkaḷ aṅkee aaḷa, naaṭṭaal teevaykku pootiya uṇavu uRpatti seyya muṭiyaamal iruntatu.
"While the foreigners were ruling there, the country was unable to achieve self-sufficiency in food."
(Sim A_1) ,

90. piḷḷay aḷutu (koṇṭu) ammaaviṭam ooṭinaan.
"Crying, the child ran to his mother."
(Sim A_2) ,

91. yuttam muṭiṉṟa pin, veRRiaṭayntavarkaḷ jermaniyay pirittaarkaḷ.
"After the war was over, the victors divided Germany up."
(Sub A_1)

and

92. murukan aṉṉanay eemaaRRi (viṭṭu), paṇattay eṭuttaan.
"Having tricked his elder brother, Murukan took the money."
(Sub A_2)

(The particular sub-class illustrated by each sentence is indicated within parentheses, after it.)

The last of the sub-classes of Perspec, Neut Act, is developed into S plus any one of three alternative postfixes. An illustration of the kind of sentence produced by the transformation based on this node is

93. putu aasiriyar niyamikkappaṭṭatooṭu, vakuppil tiruttam kaaṇappaṭṭatu.

"With the appointment of the new teacher, there was seen an improvement in the class."

PS 10 Perspec → { Pre Act, Sim Act, Sub Act, Neut Act }

PS 11 Pre Act → { S, NP } ^ mun

PS 12 Sim Act → { Sim A_1, Sim A_2 }

PS 13 Sub Act → { Sub A_1, Sub A_2 }

PS 14 Sub A_1 → SA ^ { pin, piRaku, uṭanee }

PS 15

PS 15.1 SA → S in env. ____ ^ uṭanee

PS 15.2 SA → $\left\{\begin{matrix} S \\ NP \end{matrix}\right\}$

PS 16 Neut Act → S ^ $\left\{\begin{matrix} \text{-ooṭu} \\ \text{-uṭan} \\ \text{-um} \end{matrix}\right\}$

The third of the elements developed from Time in PS 8, T_{AD}, consists of a group of Time Adverbials like aṭikkaṭi "often", aritaaka and arukalaaka "seldom", inimeel "in future", miiṇṭum and maRupaṭi "again", potuvaaka "generally" and so on. A sentence illustrating this element is

94. tiRamayuḷḷa eeḷaykku tannuṭaya tiRamayay vaḷaras seyya santarppam mika aritaaka taan kiṭaykkum.
"It is only very rarely that a talented poor man gets a chance to develop his talents."

T_{AD} probably also includes items like oru maatattukku iru muRay "twice a month" and so on. Such phrases involve fixed collocations. For example, in phrases of the kind just illustrated, the collocation will always have the structure Numeral ^ Time Noun ^ dative case ^

Numeral ^ one of a very small set of nouns like muRay and taɭavay meaning "turn, occasion". The writer has no way of handling such fixed collocations, and the problems relating to them, together with certain other problems connected with T_{AD}, will not be investigated or accounted for in the present work.

Measure, the last of the elements developed from Time, is sub-classified into three. The first two of these sub-classes, Limit (Limitative) and Durat (Durational), each consists of a NP (which will later be shown to have a Time Noun head) followed by various other affixal elements. In the case of Limit, these affixal elements are the postfixes uḷ and meel. The transformations which assign automatic case markers (Ts 62 and 63) will indicate that when the former is chosen, the head noun will be assigned a dative case marker, while when the latter is chosen, it will be assigned a possessive case marker. An illustration of the sub-class is provided by the sentence

95. suves yuttam iru vaaraŋkaɭukkuɭ muṯintatu.
"The Suez War was over within two weeks."

The affixes of Durat are either the dative case marker (interpreted not as an automatic surface element but as a distinctive base element), or certain postfixes like aaka and meel. The second of these postfixes is phonologically identical with a postfix developed from Limit, but is distinguished from it by the fact that

the automatic case marker assigned to the nominal preceding it by the Case Assignment rule is not possessive but dative. The formal difference is accompanied by a semantic difference whose nature is highlighted by the labels chosen for the two sub-classes. These differences may clearly be perceived if 95 is compared with

96. suves yuttam oru naaḷukku meel naṭantatu.
"The Suez War lasted for more than a day." ,

which illustrates Durat.

The third sub-class of Measure consists of two concatenated elements, one or both of which may be selected by the verb. The first of these, T_{Com} (Time: Commencement), is developed into two alternative elements, T_c , or a NP (which will invariably have a Time Noun head) followed by the postfix toṭakkam "beginning with" (which is homonymous with a noun closely related to it in meaning). T_c is the element on which the embedding Time: Commencement transformation (T20) is based, and accounts for sentences like

97. veelu neeRRiruntu oru putu ṷttiyookam seytu varukiRaan.
"Velu has been doing a new job since yesterday."

The second sub-class of T_{Com} is illustrated by

98. 1949 toṭakkam siinaa mika veekamaaka apivirutti aṭayntu koṇṭu varukiRatu.
"Since 1949, China has been developing very fast."

T_{Con} , the second of the elements belonging to the third sub-class of Measure, is rewritten as a S or a NP (whose head will invariably be a Time Noun) followed by the postfix varay "until". Illustrative of the two alternatives are

99. veyyil kuuṭum varay,,vivasaayi vayalil veelay seytaan.
"The farmer worked in the field till it became hot." ,

which contains an embedded sentence in T_{Con} position, and

100. viruntu kaalay 4 maṇi varay muṭiya villay.
"The party did not end till 4 a.m. ,

which contains a NP in that position. Details of the processes involved in the former are postponed until the discussion of the transformation which carries them out.

PS 17 Measure → $\left\{\begin{matrix} \text{Limit} \\ \text{Durat} \\ (T_{Com})\ (T_{Con}) \end{matrix}\right\}$

PS 18 Limit → NP ^ $\left\{\begin{matrix} \text{ul} \\ \text{meel} \end{matrix}\right\}$

PS 19 Durat → NP ^ $\left\{\begin{matrix} \text{dat.c} \\ \text{meel} \\ \text{aaka} \end{matrix}\right\}$

PS 20 $T_{Com} \rightarrow \left\{ \begin{matrix} T_c \\ NP \ \hat{} \ \underline{to\underline{l}akkam} \end{matrix} \right\}$

PS 21 $T_{Con} \rightarrow \left\{ \begin{matrix} NP \\ S \end{matrix} \right\} \ \hat{} \ \underline{varay}$

The development of the next of the Class I expansions, Loc, has to be postponed until a more specific expansion, Recip, which belongs to Class III, is developed. Such an ordering is necessitated by the fact that two of the elements developed from Recip, Comm (Commencement) and Destin (Destination), share certain features with Loc, so that the most economical statement is one which introduces these features in both cases under a common label and then develops the node to which this label is applied. Illustrating the two elements of Recip under discussion is the sentence

101. puttaaṇṭu viḻaa kaalattil pala makkaḷ <u>paṭṭaṇaṅkaḷiliruntu taṅkaḷuṭaya uurkaḷukku</u> tirumpukiRaarkaḷ.
"During the time of the New Year festival, many people return to their villages from the towns."

where Comm is underlined once, and Destin, twice.

The development of these two elements, despite their locative associations, from a node other than Loc is well motivated. For one thing, a verb can in the base take the Loc expansion as well

as these expansions, as is demonstrated by

102. ilaŋkayil puttaaɳṭu viḷaa kaalattil pala makkaḷ paṭṭaɳaŋ-kaḷiliruntu taŋkaḷuṭaya uurkaḷukku tirumpukiRaarkaḷ.
"In Ceylon, during the time of the New Year festival, many people return to their villages from the towns." ,

which differs from 101 only in that its verb takes in addition to the other expansions, Loc. Other considerations add their support to this one, which by itself provides no conclusive justification of the position adopted in the present work. There is, for instance, the intuition that Comm and Destin are closely tied up with specific verbs, while Loc properly belongs with the general expansions of Class I, an intuition which is given formal support by the fact that the former do not occur with all classes of verb whereas the latter does. More importantly, the former are found to alternate with other expansions developed from Recip which do not have a locative flavour. For example, the Destin phrase illustrated by 101 alternates with a non-destinative phrase developed from Recip, which is illustrated by

103. piḷḷay ammaavukku irakasiyattay sonnaan.
"The child told his mother his secret."

The position is that verbs that take the former as an expansion cannot take the latter, and vice versa. This alternation is indeed

one of the factors which help in the sub-classification of verbs taking Recip as an expansion into verbs of motion such as poo "go", vaa "come", eeRi "climb", tirumpu "return" and so on on the one hand, and other verbs like peesu "speak", sol "tell", vi]akku "explain" and so on on the other: both sub-classes occur with Recip as an expansion, but the former occurs with the sub-class Destin of Recip, while the latter does not do so. Such factors argue conclusively for the separation of Destin and Comm from Loc.

The rule which formalizes the details given above about Recip will develop the node into an optional element Comm followed by one of two further optional elements, Destin and Rec. Rec, the label given to the non-destinative elements of Recip, covers in actual fact a miscellaneous group of elements. In 103, for example, Rec signifies "addressee", while in 104

104. putitaaka sutantiram peRRa naa[uka]ukku pala pirassinayka] u]a.
"The newly independent countries have many problems." ,

it signifies "possessor", and in

105. maa]avan vaakkiyattukku muRRuppu]]i vaykka villay.
"The student did not place a full stop at (the end of) the sentence." ,

"recipient". Rec also covers the dative phrase expansions derived

from the subject of involitive verbs in the pre-base. Nevertheless, there does not appear to be adequate motivation for setting up separate grammatical categories on the basis of such factors, with their varying degrees of generality. (Some such factors are indeed unique.) What is involved here is probably the rather vague and non-definitive border line between grammar and lexis, and Rec will, therefore, be left as it is.

PS 22 Recip → (Comm) $\left(\left\{\begin{matrix}\text{Destin}\\ \text{Rec}\end{matrix}\right\}\right)$

Of the elements introduced by PS 22, Comm is developed into two optional concatenated elements, Com_1 and Com_2, on each of which an embedding transformation (Ts 22 and 23 respectively) is based. Illustrating the two in turn are

106. aarpaaṭṭam seypavan marattiliruntu iRaŋkinaan.
"The man who was protesting climbed down from the tree."

and

107. veelu panayppuuviliruntu kaḷḷu vaṭittaan.
"Velu tapped toddy from the palmyrah flower."

The difference between the two, which will be fully expounded when the transformational rules associated with them are presented, is that in the case of Com_1 the subject of the embedded sentence is

identical with the subject of the verb modified by it, whereas in the other case it is identical with the object of this verb. The rule as formulated below allows the verb to choose both elements, though this remains only a theoretical possibility, sentences like

108. mantiri mannaariliruntu atikaariyay tanatu ilaakaaviliruntu veeRoru ilaakaavukku maaRRuvittaar.
"The Minister, (operating) from Mannar, got the officer transferred from his department to another department."

which result from such a choice being stylistically highly inelegant.

PS 23 Comm → (Com_1) (Com_2)

The element Destin developed from Recip consists of two sub-classes, Dest and Conclu (Conclusion), both of which involve locative elements. Conclu, in fact, is developed into a postfix, varay "until", preceded by either Loc or a NP. The latter possibility is illustrated by

109. kantan kaṭaRpaaray varay niintinaan.
"Kandan swam up to the reef."

When Loc occurs in this context it does not have all its usual exponents, being developed simply into the Locative Adverb. In other contexts, however, Loc can potentially be developed into three sub-

classes. One is the Locative Adverb illustrated by

110. pi||ay <u>aŋkee</u> vi|ayaa|inaan.
"The child played there."

The second is a locative postfix followed by a locative marker and optionally preceded by a NP, which automatically acquires a dative or a genitive case ending. This sub-class is illustrated by

111. pi||ay <u>suvarin pinnaalee</u> maRayntaan.
"The child hid behind the wall."

The third sub-class of <u>Loc</u> is a NP (which subsequently acquires an automatic genitive or dative case marker) followed by a locative postfix, which, however, is different from the locative postfix of the second sub-class. This third sub-class is illustrated by

112. turuppukka| <u>ellaykku appuRam</u> seerntaarka|.
"The troops gathered on the other side of the border."

<u>Dest</u> closely resembles <u>Loc</u>, being itself redeveloped into three sub-classes which are very much like those of <u>Loc</u>. The first of these is the Locative Adverb, which is illustrated by

113. pi||ay <u>aŋkee</u> poonaan.
"The child went there."

The second, which differs from the corresponding locative sub-class

primarily in that it has a destination marker instead of a locative marker following the locative postfix, is illustrated by

114. hilariyum ṭensiŋum evaraṭin meelukku eeRinaarkaḷ.
"Hillary and Tensing climbed to the top of Everest."

The third sub-class, which again resembles the corresponding sub-class of Loc, consists of a NP followed by a destinative postfix. Illustrating this sub-class is

115. kuuṭṭattinar polisaar miitu kal viisinaarkaḷ.
"The crowd threw stones at the police."

It remains to be pointed out that the Locative Adverb, as illustrated by the sentences given above, is a complex consisting of the Prothetic Particle followed by an element which will be termed L Ad.

The analysis of these classes throws up a host of morpho-phonemic factors for consideration. For instance, the differences between the sub-classes of Loc and Dest, which had previously been established on syntactic grounds, are further confirmed by certain important, though by no means complete, distinctions of morphophonemic behaviour. None of these is, however, of particular relevance at this point, and they will not therefore be dealt with.

PS 24 Destin → { Dest / Conclu }

PS 25 Conclu → $\left\{\begin{matrix} NP \\ Loc \end{matrix}\right\}$ ^ varay

PS 26

PS 26.1 Loc → L Adv in env. ____ ^ varay

PS 26.2 Loc → $\left\{\begin{matrix} L\ Adv \\ (NP)\ L_1\ \hat{}\ LM \\ NP\ \hat{}\ L_2 \end{matrix}\right\}$

PS 27 Dest → $\left\{\begin{matrix} L\ Adv \\ (NP)\ L_1\ \hat{}\ DM \\ NP\ \hat{}\ Post\ D \end{matrix}\right\}$

PS 28 L Adv → Prot P ^ L Ad

One further point to be made about the rules just presented is that wherever NP has been introduced by them it represents a complex made up of a noun or pronoun head optionally preceded by one or more qualifiers, and may not be developed, as NP in certain other contexts can, into a nominalized sentence. This fact will be indicated by the later rule which develops NP (PS 62).

The next few rules are devoted to the development of Class II expansions. The first of these, Substit, is rewritten as a NP

followed by one of three postfixes, <u>poruṭṭu</u> , <u>nimittam</u> and <u>aaka</u>. These postfixes have various meanings such as "for, instead of, in order to" and so on. Generally, when the NP preceding them is a nominalized sentence, as in 117 , they have the last of the three meanings listed, the purposive. The first two of them, <u>poruṭṭu</u> and <u>nimittam</u>, which are not frequently used in modern Tamil, are illustrated by

116. mutal kaariyatarisi tuutarin { poruṭṭu / nimittam } nuulnilayattukku nankoṭaypputtakaŋkaḷ aḷittaar.

"The First Secretary presented the gift of books to the library for/in place of the Ambassador." ,

and the third by

117. taŋkaḷuṭaya piḷḷaykaḷay palkalaykkaḷakattukku anuppuvataRkaaka pala peRRoorkaḷ kaṭanpaṭukiRaarkaḷ.

"Many parents fall into debt in order to send their children to the University."

Where the former are chosen, the NP preceding them is obligatorily assigned the possessive case marker (which, the morphophonemic rules will indicate, has zero phonological exponency in certain contexts), while where the latter is chosen, the NP preceding it is obligatorily converted into the dative case. This fact, which is illustrated by the sentences above, is attended to by the Case Assignment transformational rules (Ts 62 and 63). <u>aaka</u> may,

subsequent to this assignment of case, be deleted optionally, a fact accounted for by T 83. Where the NP preceding the three Substit postfixes is a nominalized sentence, the verb of this sentence cannot be a $V_{Cop\ Iden}$, a V_{Pos}, or a tenseless V_{Imp}, a fact which will be indicated in the conditions on T 37, which nominalizes sentences.

PS 29 Substit → NP ^ { poruttu / nimittam / aaka }

The Manner node is developed into five concatenated elements, none of which is obligatory. The first of these, Result, which is illustrated by

118. viyaapaaram sila vaaṇikarkaḷaal aṭakkappaṭṭatan viḷayvaaka, vaaḻkkaysselavu uyarkiRatu.
"The Cost of Living is rising because trade is controlled by a few businessmen." ,

is rewritten as a NP followed by a complex consisting of the noun viḷayvu "result" and the postfix aaka. Since there is no apparent way of deriving this construction transformationally, the rule will treat the complex as a postfixal form in its own right. Where the NP preceding the complex is developed into a construction which has a noun head, this noun head has to be selected from among certain inanimate nouns, a fact which PS 72.51 will indicate. The Case Assignment transformation (T 63) will also indicate that NP

in this context will take the possessive case marker.

The second of the elements developed from Manner is Represen (Representative), which consists of a NP followed by a complex form, the first part of which is the word saarppu "behalf" , the second, either the locative case marker or the postfix aaka. Illustrating this element is

119. kaariyatarisi sukamillaata talayvarin saarppil
toṭakkappeessay aḷittaar.
"The secretary made the opening address on behalf of the sick president."

PS 62 will indicate that NP in this context cannot be realized as a nominalized sentence, while T 63 will indicate that it will acquire an automatic possessive case suffix.

The third element developed from Manner, Method, is sub-classified into Means, which consists of a NP followed by the postfix muulam "by means of ", and Agent, which consists of a NP followed by one of three postfixes, -aal, -ooṭu or -uṭan. The two sub-classes are illustrated in turn by

120. takutiyaRRa manitan tanatu selvattin muulam
ctaapanattin meelatikaari aanaan.
"The incompetent man became director of the establishment by means of his wealth." ,

and

121. vivasaayi muRkaalattu kalappay { -ootu / -utan } vayalay ulutaan.

"The farmer ploughed the field with a primitive plough."

PS 62 will indicate that the NP developed from Agent may not be a nominalized sentence, while T 63 will indicate that the NP developed from Means will be assigned an automatic possessive case marker.

The nodes dominated by Mann, the fourth element developed from Manner, involve highly complicated transformational rules (Ts 28 to 35). Details regarding them will be discussed when these rules are presented, and at this point only the briefest indication of the sub-classification of Mann, together with illustrations, will be provided. Mann is initially subdivided into Man Comp (Manner: Comparative) and Man Condi (Manner: Condition). T 28 is based on the former, which is illustrated by

122. sila makkal nerukkatiyil oru katavul natakkiRatu poola natappaarkal.

"Some people act like gods in a crisis."

Man Condi, which is distinguished from Man Comp partly by the fact that almost all the sub-classes dominated by it involve the embedding of sentences whose main verbs do not inflect for tense, is rewritten as two alternative sub-classes, Non-Im Condi (Non-Immediate Condition) and Im Condi (Immediate Condition), both of which are, in turn, further subdivided. Im Condi is developed into

Identific C (Identificational Condition) and Im C. The former, on which T 29 is based, accounts for sentences like

123. raaman saŋkattin mukkiya piratinitiyaaka amayssaray santittaar.
"Rama met the Minister as the chief representative of the society."

Im C further sub-divides into IC Perso (Personal) and IC Non-Perso (Non-Personal). The former, on which T 30 is based, accounts for sentences like

124. saŋkattalayvarin naṭavaṭikkaykaḷayp paRRi aŋkattavarkaḷ koopamaay irukkiRaarkaḷ.
"The members are angry about the measures taken by the president of the society." ,

while the latter, on which T 31 is based, accounts for sentences like

125. viyaṭnaam kuḷappamaay irukkiRatu.
"Vietnam is in a state of confusion."

Non-Im Condi, the other sub-class of Man Condi, is also developed into two sub-classes, NIC Comp (Comparative) and NIC Stat (Stative). The former, on which T 35 is based, is illustrated by

126. viyaṭnaam poor anmayil muṭiya maaṭṭaatu poola irukkiRatu.
"It appears as though the Vietnam War will not be over in the near future."

The latter is developed into NIC Perso (Personal) and NIC Non-Perso (Non-Personal), and the transformations based on these(Ts 33 and 34) will produce sentences like

127. eḍ|aykku pasiyaay irukkiRatu.

"The beggar is hungry." ,

and

128. veḷiyee veyyilaay irukkiRatu.

"There is sunshine outside."

respectively.

The unintelligibility at this point of the sub-classification is increased by the inadequacy of the English translations provided. The exact nature of the differences involved will, however, be clarified during the discussion of the transformations referred to.

The last of the elements developed from Manner, MA, divides into two sub-classes, M_{Advb} and Intensif (Intensifier). The latter, which is illustrated by

129. kosuku paṭuttavaray atikam alakaḷittatu.

"The mosquito troubled the sleeper a great deal." ,

figures in other rules too (see PSS 69 and 70), and further information about it will be provided when these rules are discussed.

M_{Advb} consists of two sub-classes, both of which are followed by an adverbial marker (AM) which is bound to them. The first of these is an element termed M_a , which is preceded by an obligatory Qualifier. Its ability to take a Qualifier indicates

that M_a has a nominal quality, and indeed the words that belong to this class, such as vitam "manner", maatiri "manner", vaḻi "way", aaRu "way", vakay "kind", muRay "method" and paṭi "step", elsewhere behave like nouns. There is no apparent way, however, of deriving the adverbial complexes that M_a, its Qualifier, and AM together constitute transformationally from NP, and so they are introduced below as separate adverbial elements. Illustrating the sub-class under discussion is

130. murukan peRRoor sonna maatiriyaaka maṇam seytaan.
"Murukan got married as his parents told him to."

The second sub-class of M_{Advb} is M_{Adv}, which, in combination with AM, forms "true" adverbs such as nanRaaka "well", ketiyaaka "quickly" and so on. This sub-class is illustrated by

131. murukan ketiyaaka kataykkiRaan.
"Murukan speaks fast."

AM generally has the form aaka. With words of the sub-class M_a, however, it often is realized as the locative case, as is demonstrated by

132. murukan keṭṭa vitattil selvam peRRaan.
"Murukan obtained his money by bad means."

Not all members of M_a can take the locative case as AM, aaRu, for example, being a form which cannot do so. Often AM, when occurring

with $\underline{M_a}$, is optionally deleted, so that 130, for example, has an alternative form,

133. murukan peRRoor sonna maatiri maṇap seytaan.

The details regarding the exponency of AM belong properly to the province of the morphophonemic rules, and will not be formalized below.

PS 30 Manner → (Result) (Represen) (Method) (Mann) (MA)

PS 31 Result → NP ^ viḷayvaaka

PS 32 Represen → NP ^ saarppu { -loc.c / -aaka }

PS 33 Method → { Means / Agent }

PS 34 Means → NP ^ muulam

PS 35 Agent → NP ^ { -aal / -ooṭu / -uṭan }

PS 36 Mann → { Man Comp / Man Condi }

PS 37 Man Condi → { Im Condi / Non-Im Condi }

PS 38 Im Condi → { Identif C / Im C }

PS 39 Im C → { IC Perso / IC Non-Perso }

PS 40 Non-Im Condi → { NIC Comp / NIC Stat }

PS 41 NIC Stat → { NIC Perso / NIC Non-Perso }

PS 42 MA → { M_{Advb} / Intensif }

PS 43 M_{Advb} → { Qual ^ M_a / M_{Adv} } ^ AM

The development of Modif, the last of the Class II verbal expansions, must await the rules dealing with a Class III expansion, Object, since these introduce elements that are of relevance to some of the nodes it dominates. Object is sub-classified into five. The most common of these sub-classes, a NP which inflects for the accusative case, is illustrated by

134. maaṭu vaṇṭiyay iḻuttatu.

"The bull drew the cart."

The case inflection may in certain instances be optionally deleted, as the alternative form of 134,

135. maaṭu vaṇṭi iḷuttatu. ,

shows, while in certain other instances, as in

136. oru kuṭumpattukku muunRu piḷḷaykaḷ kaaṇum.
"Three children are sufficient for a family." ,

where Object is underlined, it has zero phonological exponency. The rules below will not concern themselves with such details.

A second sub-class of Object is labelled S_{Inf} (Infinitive Sentence). The choice of this element brings into operation a transformation which embeds a sentence in Object position, converting the verb of this sentence into the infinitive in the process. A sentence so produced is

137. piḷḷay paḷḷikkuuṭattil veeRa piḷḷaykaḷooṭu seerntu vaaḷa paḷakinaan.
"The child learned to live with other children in school."

The justification for treating S_{Inf} as a sub-class of Object is that verbs which choose it may instead choose other sub-classes of Object, as is borne out by

138. piḷḷay paḷḷikkuuṭattil nalla vaḷakkaṇkaḷay paḷakinaan.
"The child learned good habits in school." ,

which uses the same verb as 137 but with an accusative NP as Object in place of S_{Inf}. That is to say, the two sub-classes are very evidently in complementary distribution.

S_{Inf} is itself developed into two sub-classes depending on whether the sentence embedded is imperative, as in

139. tooṭṭakkaaran veeluvay teeŋkaaykaḷay piṭuŋkas sonnaan.
"The owner of the estate told Velu to pluck the coconuts." ,

or non-imperative, as in 137. Details regarding these will be provided when Ts 39 and 40 are discussed.

A third sub-class developed from Object is Causal, which is in turn developed into Direct Cau and Indirect Cau. The former may be chosen by two verbs, sey "do" and viṭu "allow", and is illustrated by

140. putu nilaymay arasiyalvaatiyay tanatu tiṭṭaŋkaḷay maaRRas seytatu.
"The new conditions made the politician change his plans." ,

and

141. raaman naŋpanay tanatu kaṭitaŋkaḷay vaasikka viṭṭaar.
"Rama allowed his friend to read his letters."

When Direct Cau is chosen, T 5 is brought into operation. This rule, details of which are not provided here, embeds a sentence in Object position, converting its nominative subject noun into the accusative

case and its verb into the infinitive. The restrictions on the verb in the embedded sentence are very few.

Here again, the justification for treating Direct Cau as having been developed from Object is that it is in complementary distribution with other sub-classes of Object.

Indirect Cau, which, as the lexicon will reveal, can be selected only by the verb sey "do", is developed into two alternative sub-classes, Cau_1 and Cau_2, on each of which an embedding transformation is based. The transformations concerned, Ts 6 and 7, both embed a sentence in Object position, deleting the verb of the matrix sentence and making certain other changes in the process. While these transformations share certain significant features in common, they differ sufficiently to warrant treatment as separate sub-classes. One of the differences, which may be perceived if

142. eḻuttaaḻan tanatu puttakattay assaṯippittaan.
"The writer got his book printed."

(produced by the transformation based on Cau_1) is compared with

143. viruntinarin kuussal kantanay iravil eḻumpappaṉṉinatu.
"The cries of the revellers made Kandan wake up in the night."

(produced by the transformation based on Cau_2), concerns the shape of the affixal form added to the root of the verb in the embedded

sentence by the two rules. This difference apart, the verb in the sentence embedded by the transformation based on $\underline{\text{Cau}_1}$ is far more restricted than that in the sentence embedded by the other transformation. Thus

144. nooyaaḷi iRantaan.

"The patient died." ,

for example, is prohibited on account of its verb from being embedded by the former transformation. In many such cases it is found that the verbs concerned are involitive, but this is not necessarily so. Very often, too, it will be found that the sentence embedded by this transformation can contain only the volitive of a pair of volitively related verbs. Here also it will not be possible to give a general rule barring sentences containing involitive verbs from being embedded by the transformation. The reasons for this have already been provided on pp. 131 and 132 above. However this may be, the fact is that the verb in sentences embedded by this transformation is very much more restricted than the verb in sentences embedded by the transformation based on $\underline{\text{Cau}_2}$. Various other differences too are to be found between $\underline{\text{Cau}_1}$ and $\underline{\text{Cau}_2}$, but these will be postponed until the discussion of the transformational rules.

Yet another sub-class developed from Object is Quotat (Quotation). The lexicon will indicate that this sub-class may be selected by just one verb enRu. (This will be referred to below as the "Quotative verb" , while sentences in which it occurs as the

main verb will be referred to as "Quotative sentences".) Illustrating Quotat is

145. raaman tanakku sukamillay enRaan.

"Rama said that he was not well."

As is to be expected, Quotat is an indefinable class. In the discussion of the Passive transformation (T 9) later, however, there will be reason to isolate certain members of this class for special comment.

The last of the sub-classes developed from Object is Fact Obj (Factive Object), which, the lexicon will indicate, may be chosen by only a few verbs like sol "say", maRa "forget" and so on. Fact Obj , when chosen, brings into operation a transformational rule which embeds a Quotative sentence in Object position. Details are reserved for the discussion of this rule (T 38), and here only the following example of the kind of sentence produced by it is provided.

146. nooyaaḷi vayiRu nookiRatu enRu sonnaan.

"The patient said that his stomach was hurting."

PS 44 Object → { NP ^ acc.c ; S_{Inf} ; Causal ; Quotat ; Fact Obj }

PS 45 $S_{Inf} \rightarrow \left\{ \begin{matrix} S_{In\ Gen} \\ S_{In\ Imp} \end{matrix} \right\}$

PS 46 Causal $\rightarrow \left\{ \begin{matrix} \text{Direct C} \\ \text{Indirect C} \end{matrix} \right\}$

PS 47 Indirect C $\rightarrow \left\{ \begin{matrix} Cau_1 \\ Cau_2 \end{matrix} \right\}$

The Class II expansion, Modif, may now be returned to. This covers all those elements which modify the verb in terms of voice, aspect, mood (the Imperative and Interrogative excluded) and tense. As regards voice, the modification depends on the choice by the verbs concerned of the node Passive. This choice is possible only if the verbs take an Object, and if this Object is represented by any one of its sub-classes other than S_{Inf}. The rule below, while indicating this restriction, will initially permit all verbs to take the three other elements covered by Modif.

PS 48

PS 48.1 Modif $\rightarrow$ (Passive) (Aux_{Asp}) (Particle) (Neg)

in env. X ^ Object ^ Y ^ ____

where Object $\neq S_{Inf}$

PS 48.2 Modif → (Aux_{Asp}) (Particle) (Neg)

Passive, which is illustrated by

147. iraṉṭaam ulaka yuttattil pala aayirakkaṇakkaana makkaḷ aḻikkappaṭṭaarkaḷ.
"Many thousands of people were destroyed during the Second World War." ,

is discussed in full on pp. 264 to 277.

There are two major points to be made about Aux_{Asp}. One relates to the problem of distinguishing these auxiliaries from main verbs. The problem arises because of the fact that virtually all the auxiliaries share certain significant features with various non-auxiliary verbs: they have identical phonological shapes, behave alike morphophonemically, and appear in superficially identical complexes. To illustrate, the underlined verbal element in

148. vivasaayi vayalay uḻutu iruntaan.

could be interpreted either as an auxiliary verb, whereupon the sentence would translate

149. The farmer had tilled the field." ,

or as a main verb, whereupon it would translate

150. Having tilled the field, the farmer sat down."

The major formal feature that distinguishes auxiliary verbs from the main verbs they resemble in this manner concerns the derivational history of the strings underlying the sentences in which the two kinds of verb appear. To explicate, when for example 148 has the reading 150, that is, when iru is functioning as a main verb in it, it may be expanded to

151. vivasaayi vayalay uḻutu suvarilee iruntaan.
"Having tilled the field, the farmer sat on the wall."

This shows that iru as a main verb in such a sentence may take its own expansions, independently of the other verb in the complex. In 151, the expansion it takes is the Locative element suvarilee "on the wall". Such latitude of behaviour is denied to iru when it is an auxiliary verb, so that 148 cannot, for example, be in any way associated with 151 when it has the reading 149. What this evidence establishes is that where such verbs as iru, while occurring in verbal complexes of the kind illustrated, are main verbs in sentences, these sentences are to be interpreted as having been derived by means of a transformation which embeds one sentence in another, the verbs in each of the sentences involved in the transformation carrying their own expansions, which they take independently of each other, into the sentence thus derived. Thus in its reading 150, 148 is to be interpreted as having been derived by embedding as a Sub Act expansion of the main verb iru in

152. vivasaayi Sub Act iruntaan.

"The farmer Sub Act sat down." ,

the sentence

153. vivasaayi vayalay uḻutaan.

"The farmer tilled the field."

On the other hand, where verbs such as iru are auxiliary verbs, their inability to take expansions independently of the verb they occur attached to establishes that they are not derived by such a transformation, being instead optionally introduced as separately concatenated elements by the PS rules. These auxiliaries and the main verbs they modify form in each case a single compound unit. This unit may as a whole take verbal expansions, which, however, are determined by the main verb. The auxiliaries are thus limited to modifying the main verb aspectivally, and add no lexical content to the sentences in which they occur, unlike the main verbs they resemble.

Associated with the derivational distinction between the two kinds of verb is the concomitant factor of inseparability. If in a complex there are two verbs, one following the other, which are not auxiliaries, they can be separated one from another, generally by expansions taken by the second of them. This has been illustrated by 151. On the other hand, an auxiliary verb may not be separated from the main verb it is attached to except by a limited set of other

auxiliary verbs. Details regarding the possibilities here are discussed immediately below.

The second major point about $\underline{Aux_{Asp}}$ relates more particularly to the rules to be formulated. The label $\underline{Aux_{Asp}}$ refers to a small group of auxiliary verbs whose co-occurrence possibilities with main verbs vary. This is a point which the lexicon will handle. There are other kinds of co-occurrence restrictions involved, however, which the lexicon cannot properly account for because they are concerned with the possibilities of combination among various of these auxiliaries. These restrictions, which are particular to the sub-system which the Aspectival Auxiliaries form, will be accounted for by a series of context-sensitive rules, which will also attend to the relations of ordering among the auxiliaries.

Before proceeding with the rules, it must be pointed out that often the aspectival modifications made by the auxiliaries do not lend themselves to any kind of satisfactory translation in English. An attempt has been made to supply some part of this deficiency by means of labels which suggest as nearly as possible the nature of the modification made, but here too it must be noted that in combination the auxiliaries take on meanings that the labels fail to represent. It must also be pointed out that the rules allow certain combinations which are stylistically awkward, it being rarely that complexes of more than two auxiliaries are found.

The first rule below indicates that $\underline{Aux_{Asp}}$ is generally

developed into either Antic (Anticipative) or one of two alternative elements, Reten (Retemtive) or Complet (Completive), followed by an element labelled Aux_A. In the latter case, neither element is obligatory. Antic is illustrated by

154. kuuṭṭam oru maṇittiyaaḷattil toṭaṇkavirukkiRatu.
"The meeting is to begin in an hour."

Where the verb which chooses it is transitive, a process of obligatory passivization (which will be discussed on pp. 267 to 269) takes place. Reten and Complet are illustrated by

155. maaṇavan paaṭattay paṭittu koṇṭaan.
"The student learned the lesson."

and

156. kaariyatarisi kaṭaysi kaṭitattay eḷutippooṭṭaan.
"The secratary wrote the last letter."

respectively. There is a sense of the "retention" of the effect of the action represented by the verb in the former sentence, and a sense of the completion of the action represented by the verb in the latter, which the translation fails to bring out. Aux_A has to be further sub-divided, and will not, therefore, be illustrated at this point.

Not all of these sub-classes can be developed from Aux_{Asp} in Imperative sentences. Moreover, those of them that do

appear in such sentences do not appear in the combinations described above. The rule below will formalize the differences by developing $\underline{Aux}_{\underline{Asp}}$ in Imperative sentences into three alternative sub-classes, Reten, Complet and $\underline{Aux}_{\underline{A}}$.

$\underline{Aux}_{\underline{A}}$ is developed in Imperative sentences into an element labelled $\underline{Au}_{\underline{A}}$. The only other context in which $\underline{Aux}_{\underline{A}}$ is so restricted is when it follows Complet. In all other contexts it is developed into one of three elements, Real (Realizative), Contin (Continuative) or Progres (Progressive), followed by $\underline{Au}_{\underline{A}}$. Neither element is obligatory. The three alternatives listed above are illustrated in turn by

157. tiraaviṭarkaḷ ten intiyaavil vaaḻa vantaarkaḷ.
"The Dravidians came to live in South India." ,

158. tii pala naaṭkaḷukku erintukoṇṭupoonatu.
"The fire raged for several days."

(in which the auxiliary illustrated happens to be preceded by Reten) and

159. veelu koḻumpil ippoḻutu ayntu varuṭaŋkaḷaaka paṭittu varukiRaan.
"Vela has now studied for five years in Colombo."

The semantic difference between Contin and Progres consists primarily in a sense of relative immediacy - Progres is felt to be perhaps more immediate than Contin.

Au_A is itself developed differently according to the context of its occurrence. Generally, it is developed into Perf (Perfect), Futur (Futurative) or Conclu (Conclusive), the last of which may be followed by Stat (Stative). None of these elements is obligatory except in one environment, Reten ^ Contin ^ ____, where Stat can be chosen only if Conclu has previously been chosen. That is, there can be no sequence

160. *Reten ^ Contin ^ Stat ,

since the last two elements must be separated by Conclu to give the grammatical, if awkward, sequence

161. Reten ^ Contin ^ Conclu ^ Stat .

Of the elements developed from Au_A , Perf is sub-divided into two, Per_1 and Per_2 . The necessity for this is provided by the consideration that the second of these sub-classes is, like the Possessive main verb, ul, it resembles, an irregular element, and special points that do not apply to Per_1 have to be made about it. Per_1 and Per_2 are illustrated in turn by 148, in its reading 149, and

162. ellaa maaṇavarkaḷum teervil teerssi aṭayntuḷḷaarkaḷ.
"All the students have passed the examination."

As the translations show, there is very little, if any, difference of meaning between the two auxiliaries.

The main formal difference between them is that a verb which chooses Per_2 cannot choose also the element Particle introduced by PS 48, a disability it will not suffer from if it chooses Per_1 . This is demonstrated by the ungrammaticality of the string

163. * murukanaal inta aniitiyay seytu⌊⌊a mu⌈iyum.
[[It is possible that this injustice has been done by Murukan.]] ,

in which Per_2 is followed by a Modal developed from Particle. The rule below will account for this fact by developing Perf as Per_1 in the environment of Particle, and as Per_1 and Per_2 elsewhere.

The other elements developed from Au_A , Futur, Conclu and Stat are illustrated in turn by

164. arasaaŋkam pala putu viiṯuka⌊ay kaṯṯap pookiRatu.
"The Government is going to build many new houses." ,

165. aavalaana pi⌊⌊ay inippuka⌊ ellaavaRRayum mu⌈ittu viṯṯaan.
"The greedy child finished all the sweets."

and

166. piŋŋaan u⌈ayntu ki⌈antatu.
"The plate was broken."

The difference in meaning between Conclu and Complet (this was discussed earlier) is again a subtle matter, this time of comparative

finality: the latter appears to express a greater sense of finality than the former.

When a transitive verb takes Stat as an auxiliary, the sentence in which it occurs undergoes an obligatory process of passivization, together with certain other obligatory and optional changes. These details will be fully discussed on pp. 267 to 269.

While Au_A is generally developed as described above, in certain environments it is developed differently. In Imperative sentences, it is developed into Conclu and nothing else. In the environment of either Reten or Progres, or both in the order specified, it is developed into only Perf or Futur. In the environment of Real, whether preceded by Reten or not, it is developed into Perf, Futur or Conclu.

PS 49

PS 49.1 $\quad Aux_{Asp} \rightarrow \left\{\begin{matrix} \text{Reten} \\ \text{Complet} \\ Aux_A \end{matrix}\right\}$ in env. Imp ^ X ^ ____

PS 49.2 $\quad Aux_{Asp} \rightarrow \left\{\begin{matrix} \text{Antic} \\ \left(\left\{\begin{matrix} \text{Reten} \\ \text{Complet} \end{matrix}\right\}\right) \quad (Aux_A) \end{matrix}\right\}$

PS 50

PS 50.1 $\quad Aux_A \rightarrow Au_A$ in envs. $\left\{\begin{matrix} \text{Complet} \ \hat{} \ \_\_\_\_ \\ \text{Imp} \ \hat{} \ X \ \hat{} \ \_\_\_\_ \end{matrix}\right\}$

PS 50.2 $Aux_A \rightarrow \left(\left\{\begin{matrix}\text{Real}\\ \text{Contin}\\ \text{Progres}\end{matrix}\right\}\right) \ (Au_A)$

PS 51

PS 51.1 $Au_A \rightarrow$ Conclu in env. Imp ^ X ^ ____

PS 51.2 $Au_A \rightarrow \left\{\begin{matrix}\text{Perf}\\ \text{Futur}\end{matrix}\right\}$ in env. (Reten) (Progres) ____

PS 51.3 $Au_A \rightarrow \left\{\begin{matrix}\text{Perf}\\ \text{Futur}\\ \text{Conclu}\end{matrix}\right\}$ in env. (Reten) Real ^ ____

PS 51.4 $Au_A \rightarrow \left\{\begin{matrix}\text{Perf}\\ \text{Futur}\\ \text{Conclu (Stat)}\end{matrix}\right\}$ in env. Reten ^ Contin ^ ____

PS 51.5 $Au_A \rightarrow \left\{\begin{matrix}\text{Perf}\\ \text{Futur}\\ \text{(Conclu) (Stat)}\end{matrix}\right\}$

PS 52

PS 52.1 Perf → Per_1 in env. X^^ ____ ^ Particle ^Z

PS 52.2 Perf → $\left\{\begin{matrix}Per_1\\ Per_2\end{matrix}\right\}$

A final point relating to the Aspectivals is that they follow the main verb in the order indicated. As the illustrative sentences show, some of the Aspectivals require the verbal element (whether main verb or auxiliary) immediately preceding them to be obligatorily converted into the infinitive, while others require it to be converted into the past participial form. Antic, Real and Futur are of the former variety, while the rest of them are of the latter variety. Ts 65 and 66 attend to this point.

Particle, which was developed from Modif in PS 48, covers the tense markers and a small group of modal auxiliaries (hereinafter "Modals"). Once again a special statement is required in developing the node to account for its behaviour in Imperative sentences. The only one of the various elements traceable to Particle that a verb in an Imperative sentence may take is the Future tense marker, as is illustrated by

167. nii appeṭṭiyay tuukkuvaay.
"You lift that box."

This too may, as the discussion of T 93 shows, be optionally deleted, a choice that is more often made than not. Since in the rules the Future tense marker is developed from the node Tense, which in turn is developed from a node labelled Aux_{TM}, the rule dealing with Particle in this environment will rewrite it as Aux_{TM}, leaving the later rules to eliminate all possibilities other than Future tense.

There is one other environment too in which Particle is rewritten in this restricted way. This is when the verb which selects Particle also selects Neg. In all other contexts it is rewritten either as Aux_{TM} followed optionally by the Optative Modal, or as the Subjunctive Modal. The latter is illustrated by

168. pi||ay pommay e|ukka||um.
"Let the child take the doll."

When the Optative is chosen by a verb, Aux_{TM}, which precedes it, is invariably realized as the Future tense, as is illustrated by

169. tampatika| pallaa|u vaa|vaarka| aaka.
"May the couple live long."

Generally, however, the Future tense marker is deleted in this context, and this and related changes will be attended to by T 94.

In terms of what has been stated above, the rule developing Aux_{TM} will have to indicate that in Imperative sentences, and in the environment of the Optative, it is rewritten only as Tense. In one other context too Aux_{TM} will have to be developed in this manner. This is when the verb which chooses it has already chosen Antic. Whereas, however, in the former two environments Tense is redeveloped into Fut (Future), in the environment of Antic it is redeveloped into either Past or Pres (Present).

In all contexts other than those specified above, Aux_{TM}

is developed into either a sub-class in which Pot (Potentive) and Tense are concatenated (in that order), or Mod (Modal). In the former case, neither item is obligatory relative to the other, and either Pot, as illustrated by

170. etirikaḷay eṉkaḷuṭaya paṭaykaḷaal vella muṭiyum.
"The enemy can be defeated by our army."

or Tense may be chosen. In any event, one at least of the two must be chosen, and this is generally Tense to the exclusion of Pot. Generally too, when Pot is chosen, Tense is not. In sentences such as

171. kiḷavanukku oru kaalattil munnuuRu iraattal paaram tuukka muṭintatu.
"At one time the old man could lift a weight of three hundred pounds." ,

where both Pot and Tense have been selected (this occurs quite rarely), Tense is invariably realized as Past. A point that the morphophonemic rules will have to attend to is that when Pot takes this Past tense marker, if the verb it is attached to is transitive, as it is in 171, the accusative case marker of the Object noun will not have overt phonological shape. T 3 below will, moreover, indicate that when Pot is chosen certain obligatory changes, whereby the subject of the verb is converted into an instrumental or a dative NP,

take place.

Mod, which is developed as an alternative to the sub-class just discussed, consists of two kinds of Modals, Jussive, illustrated by

172. arasaaŋkam ellaa makkaḷukkum uttiyookaŋkaḷ aḷikka veeṇṭum.
"The Government must provide jobs for everyone." ,

and Possib (Possibilitive), illustrated by

173. piḷḷay pommayooṭu viḷayaaṭalaam.
"The child may play with the doll."

As illustrated by these sentences, neither of these Modals may inflect for tense.

Finally, there are the rules which develop Tense. All the special points regarding the exponency of Tense have already been made with one exception: when a verb which has chosen Futur chooses Tense, this node must be developed either into Pres, as in 164, or into Past. In all other contexts it is developed into Past, Pres or Fut.

PS 53

PS 53.1 Particle → Aux_{TM} in envs. $\left\{ \begin{array}{l} Imp \hat{} X \hat{} \underline{\quad} \\ X \hat{} V \hat{} \underline{\quad} \hat{} Neg \end{array} \right\}$

PS 53.2 Particle → $\left\{ \begin{array}{l} Aux_{TM} \quad (Optat) \\ Subjunc \end{array} \right\}$

PS 54

PS 54.1 $Aux_{TM} \rightarrow Tense$ in envs. $\left\{\begin{array}{l} Imp \hat{} X \hat{} \_\_\_\_ \\ X \hat{} \_\_\_\_ \hat{} Optat \\ X \hat{} Antic \hat{} \_\_\_\_ \end{array}\right\}$

PS 54.2 $Aux_{TM} \rightarrow \left\{\begin{array}{l} (Pot)\ (Tense) \\ Mod \end{array}\right\}$

PS 55 $Mod \rightarrow \left\{\begin{array}{l} Jussive \\ Possib \end{array}\right\}$

PS 56

PS 56.1 $Tense \rightarrow Fut$ in envs. $\left\{\begin{array}{l} Imp \hat{} X \hat{} \_\_\_\_ \\ X \hat{} \_\_\_\_ \hat{} Optat \end{array}\right\}$

PS 56.2 $Tense \rightarrow Past$ in env. $X \hat{} Pot \hat{} \_\_\_\_$

PS 56.3 $Tense \rightarrow \left\{\begin{array}{l} Past \\ Pres \end{array}\right\}$ in envs. $X \hat{} \left\{\begin{array}{l} Antic \\ Futur \end{array}\right\} \hat{} \_\_\_\_$

PS 56.4 $Tense \rightarrow \left\{\begin{array}{l} Past \\ Pres \\ Fut \end{array}\right\}$

There remain to be made certain points of a transformational nature about Tense, but both these and the points relating to the last member of Modif, Neg, will be presented in the appropriate place in the Transformational sub-section.

Four more nodes have to be developed before the rewriting of NP may commence. Two of these, Cont and Topic, were introduced as Class III verbal expansions in PS 5. They are illustrated in turn by

174. raaman sutantira iyakkattil iiṭupaṭṭaan.
"Rama participated in the Independence Movement."

and

175. muntiya yutta kayti tanatu yutta anupavaṇkaḷayp paRRi peesa villay.
"The former prisoner-of-war did not speak about his war experiences."

Cont is developed into a NP followed by either a locative case marker, or one of the postfixes meel and miitu "on". The first of these alternatives is the most commonly chosen of the three. There are many collocational restrictions operating between the NP of Cont and the verbs, but such lexical points will not be accounted for in the rules.

Topic is developed into NP followed by one of three postfixes, paRRi, oṭṭi and sampantamaaka, all meaning "about, concerning".

The third of the nodes under discussion is Rec, which, as the discussion which preceded its development from the Class III expansion Recip in PS 22 showed, is a miscellaneous class. Whatever

its collocational complications, however, it is developed simply as NP followed by the dative case marker.

The last of the four nodes referred to above is Comp, introduced in PS 7. Details regarding this have already been provided in the discussion of the basic sentence patterns of Tamil, and here it will suffice to indicate only that in the rules below the dative NP which precedes the class AD_n will initially be termed Exper (Experiencer) before finally being developed into NP followed by the dative case marker.

PS 57 Cont → NP ^ { loc.c / meel / miitu }

PS 58 Topic → NP ^ { paRRi / oṭṭi / sampantamaaka }

PS 59 Rec → NP ^ dat.c

PS 60 Comp → { NP / Exper ^ AD_n / Adj_n }

PS 61 Exper → NP ^ dat. c

NP is, in many instances, developed into two sub-classes, Gen Nom and Noun, followed by an optional element mattum meaning "only". Gen Nom , if chosen, will bring into operation the General Nominalization transformation (T 37), which embeds a sentence in NP position, carrying out various changes in it in the process. This rule accounts for sentences like

176. makkaL arasaaNkam piRa naattin yuttattil iitupatuvatay kaNtittaarkaL.
"The people condemned the Government involving itself in a foreign nation's war." ,

where the nominalized sentence has been underlined.

Noun is rewritten as N or Pron (Pronoun) preceded by Qual (Qualifier). Qual, though optional in the case of N, is obligatory in the case of the Third Person pronoun, which cannot stand alone, generally appearing with the sub-class Demons (Demonstrative) of Qual to give forms like avan "he" ([[that-heJ]), ivaL "she" ([[this-sheJ]) and so on. The rule below will put Qual within parentheses and leave the lexicon to indicate this fact. (Since this is peculiarly a problem relating to the pronoun, the limited lexicon below will not in fact provide for it.) The rule as formulated will also not explicate the precise relationship between N and Pron, since this generally involves considerations relating to the extra-sentential phenomenon of resumptive concord.

There are certain contexts in which, of the two sub-classes of NP, only Noun (optionally followed by mattum) may be selected. Most of these contexts are defined in terms of the node from which NP is developed, and this will to a large extent give the rule which develops NP the character of a local transformation. One of these contexts is not, however, defined in this way. This is when NP occurs as the subject of an Imperative sentence. In this context, NP is invariably realized as a Second Person pronoun. PS 62 below will, therefore, develop NP as Noun in Imperative sentences, while later rules will eliminate all possibilities other than the Second Person pronoun in these sentences.

PS 62

PS 62.1 NP → Noun (mattum) where NP ← { (X ←) Time, Destin, Loc, Represen, Rec, Agent or Exper }

or in env. Imp ^ ____ ^ Y

where Y ≠ { case / postfix } ^ Z

PS 62.2 NP → { Noun / Gen Nom } (mattum)

PS 63

PS 63.1 Noun → (Qual) Pron in env. Imp ^ ___ ^ Y

where Y ≠ {case / postfix} ^ Z

PS 63.2 Noun → (Qual) {N / Pron}

The element mattum in PS 62 calls for special comment. As presented in the rule it follows immediately after the N or Pron head of the NP. Where, however, NP inflects for case or takes a postfix after it, mattum, if chosen, is obligatorily transferred to a position immediately following the case marker or postfix. This point, which is demonstrated by

177. raaman aṇṇanukku mattum uṇmayay aRivittaar.
"Rama revealed the truth only to his elder brother." ,

is attended to by T 103.

Qual is initially developed into three concatenated optional elements. The first of these, Selec (Selective), consists of Noun followed by the particle ul , and is illustrated by

178. ellaa aaṅkila naaval e|uttaa|arka|ul looRans taan mikas siRantavar.
"Of all English novelists, Lawrence is the greatest."

The second element, Det (Determiner), is developed into S, followed by either Ordinal or Demons (Demonstrative), the latter being in turn optionally followed by one of the two elements, Num (Numeral) or Intensif (Intensifier). None of these is obligatory relative to any of the others. If S is chosen, one of the Adjectivalization transformations, Ts 41 to 44, is set into operation, producing sentences like

179. sutantira iyakkattil iiṭupaṭṭa teesa paktarkaḷ siRayil pooṭappaṭṭaarkaḷ.

"The patriots who participated in the Independence Movement were put in jail." ,

where the sentence embedded in S position by the Adjectivalization transformation concerned is underlined.

Ordinal is illustrated by

180. raamanuṭaya iraṇṭaam piḷḷay oru sanniyaasi aanaan.

"Rama's second son became a saanniyaasi." ,

and Demons and Num (in that order) by

181. anta muunRu piḷḷaykaḷ ellaa viʃayaṇkaḷilum onRaakas seerntu naṭappaarkaḷ.

"Those three children act together in all matters."

In the rule below which develops Det, Intensif is indicated as qualifying the noun which follows it, an aspect of its behaviour that is illustrated by

182. veelu koɲsam kaḷḷu kuṭittaan.

"Velu drank some toddy."

There are certain other comments to be made about the element Intensif, but these will have to be postponed until the third of the elements developed from Qual, Attribut (Attributive) has been discussed. The rules below will develop Attribut into two optional concatenated elements, Attrib and Adj. The first of these is redeveloped into three optional concatenated elements, Descrip (Descriptive), Equat (Equational) and Poss (Possessive). In each of these three positions an Adjectivalization transformation will embed a sentence. Details will be postponed for the transformational sub-section, and here only the following examples of the three elements will be provided.

183. payamulla pillay alutaan.

"The frightened child cried." (Descrip)

184. maaNavan keelvikku pilayaana maRumoli alittaan.

"The student gave a wrong answer to the question." (Equat)

185. vaNNaan ennutaya utuppukalay kallil atittu kilittaan.

"The dhoby beat my clothes on a rock and tore them." (Poss)

The element Adj differs from the elements illustrated by 183 to 185 in that it covers items which cannot be derived or accounted for by means of an embedding transformation. This kind of "true" Adjective, if it might be called that, is illustrated by

186. murukan periya viitonRay vaaNkinaan.

"Murukan bought a big house."

The discussion of the element Intensif can now be resumed. It will be recalled that this element had previously been developed from MA (see PS 42). There are four other environments too in which

it operates. M_{Adv} (PS 43), Adj_n and AD_n (PS 60), and Adj (PS 67 below) all consist of this element Intensif followed by the head word of the phrase. This is demonstrated for each sub-class in turn by

187. ammaa makanayp paRRi koɲsam tukkamaaka peesinaaɭ.

"The mother spoke a little sadly about her son." ,

188. kantan koɲsam karuppu.

"Kandan is somewhat dark." ,

the somewhat awkward

189. avanukku oru mooṭṭaar vaɳṭi koɲsam avasiyam aakum.

"A motor car is somewhat necessary for him."

and

190. murukan koɲsam sinna mooṭṭaar vaɳṭi onRay vaaŋkinaan.

"Murukan bought a somewhat small car."

187 to 190 in fact illustrate only one of the two sub-classes of Intensif, Int. The other sub-class is labelled Cf Deg (Comparative Degree), and if selected, will bring into operation an embedding transformation which will produce sentences such as

191. veelu murukanukku kuuṭa siRappaaka naṭantaan.

"Velu behaved more nobly than Murukan." ,

where it has been chosen by the Adverbial siRappaaka "nobly". The present work will not contain the transformational rule based on the node Cf Deg.

PS 64 Qual → (Selec) (Det) (Attribut)

PS 65 Selec → Noun ^ ul

PS 66 Det → (S) $\left(\left\{\begin{array}{l}\left[\begin{array}{l}\text{(Demons)}\ \left(\left\{\begin{array}{l}\text{Num}\\ \text{Intensif}\end{array}\right\}\right)\\ \text{Ordinal}\end{array}\right]\end{array}\right\}\right)$

PS 67 Attribut → (Attrib) (Adj)

PS 68 Attrib → (Descrip) (Equat) (Poss)

PS 69 $\begin{bmatrix} M_{Adv} \\ Adj_n \\ AD_n \\ Adj \end{bmatrix}$ → (Intensif) $\begin{bmatrix} M_{ad} \\ Ad_n \\ A_n \\ Ad \end{bmatrix}$

PS 70 Intensif → $\begin{Bmatrix} Int \\ Cf\ Deg \end{Bmatrix}$

PSS 64 to 70 give only the barest outline of the elements dealt with. Some of these elements may have to be developed further. There are, moreover, problems relating to the possibilities of combination and co-occurrence among them. Such factors will, however, be excluded from treatment in the present work because they are not particularly relevant to the syntax of the verb.

The next rule rewrites the five major sub-classes of verbs already set up as complex symbols.

PS 71

PS 71.1 V_{Imp} → CS

PS 71.2 V_{Pos} → CS

PS 71.3 $V_{Cop\ Iden}$ → CS

PS 71.4 $V_{Cop\ Act}$ → CS

PS 71.5 V → CS

In terms of Chomsky's lexical rule and his later modifications and extensions of it,[39] each of the rules 71.1 to 71.5 is to be interpreted as a context-sensitive strict sub-categorization rule which sub-categorizes the lexical category on the left side of the

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39. Chomsky (1965), p. 84, p. 99, p. 121.

arrow in terms of the frame of category symbols in which it appears.[40]

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40. It will be observed that the rules preceding PS 71 have already indicated some of the most significant points relating to the strict sub-categorizational distinctions among the five major sub-classes of verbs, each considered as a whole. This means that the optimum frame of category symbols in terms of which the members of each of the sub-classes may themselves be sub-categorized varies from one such sub-class to another. To explicate, Comp has already been shown to have no place in the optimum frames of category symbols in which V_{Imp}, V_{Pos} and V may appear, while Passive has already been shown to have no place in the optimum frames of category symbols in which V_{Pos} and $V_{Cop\ Iden}$ may appear. Since details such as these are also strict sub-categorizational in effect, it might be argued that a simpler alternative to the procedure adopted above would have been not to have attended to them in the base rules, but to have assigned their dilineation to the lexicon, which in any case already has the function of further sub-categorizing the members of each of these sub-classes. No apparent simplification is, however, acceptable if it obscures any significant general point about the language. As regards the problem under discussion, the difference among the five sub-classes involved is, from both the formal and intuitive points of view, of the highest general significance. Such a distinction, the writer contends, must be presented in the categorial sub-component of the base, which would not only separate the sub-classes one from another, but also indicate as far as possible the most significant distinctions among them, if necessary by context-sensitive rules. The points relating to these distinctions will apply to each of the sub-classes as a whole, and the lexicon will mainly be concerned with those points on the basis of which individual members of each sub-class are sub-categorized relative to each other.

Chomsky himself holds that the lexicon must specify "all properties of a formative that are essentially idiosyncratic." (Chomsky (1965), p. 87.) To require it to make also general points about a language is to obscure the distinction between language-specific generalities and idiosyncratic features of individual lexical items by causing the former to be hunted equally with the latter from among the unordered items listed in the lexicon. For example, it is a general point of significance in Tamil that only transitive verbs undergo the Passive transformation, and that too only if their Objects meet certain conditions. To allow the lexicon to handle this is to lose sight of the generalization in a mass of idiosyncratic

The sub-categorization of N and Pron in terms of syntactic features may now be undertaken. Certain of the rules which attend to this will in effect be local transformational rules. The first of them will indicate that N and Pron, when developed from the node Selec, are obligatorily required to be plural, a fact which is illustrated (for N) by 178. The rules will initially develop Pron differently from N because there are certain important differences between them that have to be accounted for before the similarities.

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40. (cont.) detail, since even if the entire lexicon is laboured through, there is no explicit criterion by which the general statement can be separated from the idiosyncratic facts it keeps company with.

This point of view requires the categorial sub-component to do somewhat more than Chomsky suggests it should do in Chomsky(1965). When, of course, he makes his suggestion, he is particularly concerned with the problem of universals. He says, "It is quite natural to suppose that the rules of the base will provide the framework for the characterization of universal categories." (p. 117), and continues, "To a large extent the rules of the base may be universal, and thus not, strictly speaking, part of particular grammars." (p. 141) As the Introduction above shows, the writer is aware of the crucial significance of linguistic universals in transformational work. While acknowledging this significance, however, he contends that the different uses that particular languages make of base units are most of them related to language-specific generalities that illuminate the very nature of these languages as different languages, that it is as important to draw attention to these generalities as it is to draw attention to generalities that are shared by all languages, and that the most effective way of doing so is to attend to them explicitly in the base rules. To put it differently, the writer merely requires a particular grammar to make clearly and explicitly significant general statements about the language it purports to analyse, and to distinguish these from truly idiosyncratic facts. If the writer's proposal above to deal with the base structure of a language in terms of a hierarchy of sub-components is accepted, this requirement will probably not lead necessarily to less light being thrown on linguistic universals by particular grammars, for those elements and arrangements that recur in the various pre-basal and base components are very likely to be universals. This, however, requires further investigation on a scale which may not be undertaken here.

Pron generally enters into a three-term Person system, is always positively marked in relation to the feature [Count], and is not differentiated in terms of the proper/common distinction. In certain instances, when it is developed from Time, and when it is the subject of an Imperative sentence, it enters into a single-term Person system. Special statements are required for N too when it is developed from Time or Result.

PS 72

PS 72.1 $\begin{bmatrix} N \\ Pron \end{bmatrix} \rightarrow \left[\begin{bmatrix} +\,N, \pm\,Common \\ +\,Pron, \pm\,Thd\ P \end{bmatrix}, +\,Pl \right]$

where $\begin{bmatrix} N \\ Pron \end{bmatrix} \leftarrow$ Selec

PS 72.21 Pron → [+ Pron, + Thd P, + Count]

where Pron ← Time

PS 72.22 Pron → [+ Pron, - Thd P, + Count]

in env. Imp ^ ____ ^ X

where $X \neq \begin{Bmatrix} case \\ postfix \end{Bmatrix}$ ^ Z

PS 72.23 Pron → [+ Pron, ± Thd P, + Count]

PS 72.31 [- Thd P] → [+ Scd P]

in env. Imp ^ ___ ^ X

where $X \neq \begin{Bmatrix} case \\ postfix \end{Bmatrix}$ ^ Z

PS 72.32 $[- \text{Thd P}] \rightarrow [+ \begin{Bmatrix} \text{Fst P} \\ \text{Scd P} \end{Bmatrix}]$

PS 72.41 $\text{N} \rightarrow [+ \text{N}, + \text{Temp}, + \begin{Bmatrix} \text{Sg} \\ \text{Pl} \end{Bmatrix}]$

where N ← Time

PS 72.42 $\text{N} \rightarrow [+ \text{N}, \pm \text{Count}, \pm \text{Common}]$

PS 72.51 $[+ \text{Count}] \rightarrow [- \text{Anim}, + \begin{Bmatrix} \text{Sg} \\ \text{Pl} \end{Bmatrix}]$

where [+ Count] ← Result

PS 72.52 $[+ \text{Count}] \rightarrow [\pm \text{Anim}, + \begin{Bmatrix} \text{Sg} \\ \text{Pl} \end{Bmatrix}]$

PS 72.6 $[- \text{Anim}] \rightarrow [\pm \text{Temp}]$

PS 72.7 $[+ \text{Anim}] \rightarrow [\pm \text{Neut}]$

PS 72.8 $[- \text{Neut}] \rightarrow [\pm \text{Hon}]$

PS 72.9 $[(+ \text{Thd P}), - \text{Hon}, + \text{Sg}] \rightarrow [+ \begin{Bmatrix} \text{Masc} \\ \text{Fem} \end{Bmatrix}]$

PS 72.10 $[- \text{Count}] \rightarrow [\pm \text{Abst}]$

The next rule is a context-sensitive selectional rule which sub-categorizes the five major sub-classes of verbs in terms of the syntactic features that appear in the various positions in the strings in which their members may occur.

PS 73

PS 73.1 [+ V_{Imp}] → CS

PS 73.2 [+ V_{Pos}] → CS

PS 73.3 [+ $V_{Cop\ Iden}$] → CS

PS 73.4 [+ $V_{Cop\ Act}$] → CS

PS 73.5 [+ V] → CS

Two high level nodes, Implic (a Class I expansion) and Q (introduced by PBR 2), had been left undeveloped because there had been no motivation for developing them earlier. These will be dealt with now. Implic is developed into two elements, Reason and Condi (Conditional), on each of which a transformation is based. The former, on which T 25 is based, accounts for sentences like

192. saŋkattin ko|kayka|ay eeRRukko||a mu|iyaata pa|iyaal raaman pataviyiliruntu vilakinaan.
"Because he could not accept the Society's policies, Rama resigned." ,

while the latter, on which T 27 is based, accounts for sentences like

193. aRuvaṭay kaalattil atika maḻay peytaal payir aḻikkappaṭum.

"If it rains heavily during the harvesting season, the crop will be destroyed."

PS 74 Implic → $\left\{\begin{matrix}\text{Reason}\\\text{Condi}\end{matrix}\right\}$

Q is developed initially into two sub-classes, Q_E and Q_{AA}. If the former is chosen, it will bring into operation T 53, which, together with certain other rules, will produce questions like

194. pirittaaniyarkaḻ ilaṇkaykku een sutantiram koṭuttaarkaḻ?

"Why did the British give Ceylon independence?" ,

which expects an answer other than oom "yes" or illay "no".

Q_{AA} is developed into two sub-classes, on each of which is based a transformation which produces a question expecting the answer oom "yes" or illay "no". The difference between the two is that one of them produces tag questions like

195. murukan poy sonnaan, illayaa?

"Murukan lied, didn't he?" ,

while the other produces simple questions like

196. murukan poy sonnaanaa?

"Did Murukan lie?"

The present work will not contain the transformational rule which accounts for 195.

PS 75 $Q \rightarrow \left\{ \begin{matrix} Q_E \\ Q_{AA} \end{matrix} \right\}$

PS 76 $Q_{AA} \rightarrow \left\{ \begin{matrix} Q_{aa} \\ \text{Tag } Q \end{matrix} \right\}$

III

THE LEXICON

The lexicon below is both incomplete and highly tentative, and is rather to be looked at as an illustration of the kind of sub-component envisaged than as a final or conclusive formulation of it. Its incompleteness is due to the fact that it contains not the entire stock of lexical items in the language, but only a selection - though a representative one - of verbs from among those used in illustrative sentences in the present work. Its tentativity is due to the fact that various problems regarding it remain unsolved. Some of these problems involve theoretical considerations about the nature of grammar,[1] and until such time as a firm decision can be made about them, the lexicon must perforce remain somewhat summary.

Basically, however, the following points may be made about the lexicon. As set out below, it consists of an unordered series of alphabetically arranged lexical entries, each of which is a pair (D, C). D is generally the phonological "spelling" of the lexical item concerned. Provision is made, however, for the indication of the relationship of volition between certain pairs of verbs - (See pp. 86 to 123 above). The initial entry in the case of such pairs will not be a phonological "spelling", but a

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1. See Chomsky's discussion of some of them in Chomsky (1965).

dummy element (which will often, in fact, have the phonological shape of the involitive verb), from which the two verbs concerned will be developed. In the case of such verbs, therefore D will consist of two parts, the second of which will be the phonological "spelling" of them. The verbs will generally be spelled in their root form, but where such a form is impossible to isolate, as in the case of pootum "to be enough", the most convenient form will be chosen.

C in a lexical entry is a complex symbol, a complex symbol being defined as a collection of specified syntactic features. Among the features specified are the properties relevant to the functioning of the transformational rules relative to the lexical formatives concerned, certain properties that are relevant to their semantic interpretation, the positions in which they can occur in the pre-terminal strings produced by the PS rules, and so on. Since individual lexical formatives differ considerably from each other with regard to the points mentioned, it is to be expected that the lexicon will specify properties of formatives that are essentially idiosyncratic.

Part of the function of the lexicon is to convert the pre-terminal strings produced by the PS rules into terminal strings. The pre-terminal strings consist of grammatical formatives and complex symbols, each complex symbol being a specified set of syntactic features into which the PS rules had analysed the symbols representing lexical categories (such as N, V and so on). A

terminal string is formed by the insertion of lexical formatives into pre-terminal strings in accordance with the lexical rule which Chomsky sets out as follows: "If Q is a complex symbol of a pre-terminal string and (D, C) is a lexical entry, when C is not distinct from Q, then Q can be replaced by D."[2] Chomsky later suggests a modification of this which runs as follows: if C contains the feature [+ X ___ Y], for the insertion to take place, Q must, in addition to what has been stated in the lexical rule, be required to actually appear in the frame X ___ Y.[3] In the lexicon below it is this modified lexical rule that is applied.

While, as is evident from the discussion just completed, the lexicon below is based on the general principles Chomsky sets out, in the details of its working out there are certain differences from what he says. The complex symbol C in each case below consists maximally of four parts. The first of these specifies which of the major sub-classes of verb the lexical entry belongs to. (More will be said about this later on.) The second is the maximal syntactic frame within which the item concerned may appear. The third (which is very seldom chosen) indicates those features like [+ Obj Del] (+ Object Deletion) which have not been explicitly mentioned in the PS rules, and which are introduced for the first time in the lexicon. The last of the four parts is a simple gloss.

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2. Chomsky(1965), p. 83.
3. Chomsky(1965), p.121.

Minor differences of meaning are at times indicated here, but where a semantic difference is paralleled by any major formal differences, what appears to be phonologically one item will be listed as two lexical items.

The second of the four parts outlined requires further comment. The syntactic frame attempts to conflate a large variety of functions, and it does so as follows. All the elements with which the verb concerned may appear are marked + , and concatenated with the help of the concatenation sign , -, in the order in which they appear in the PS rules. Thus if the verb concerned takes both Object and Rec, the frame will contain the features, [... - + Rec - + Object - ...]. At certain points, where there is a particular reason to indicate the association of elements, the other concatenation sign, ^, is used. Thus if, of the various sub-classes of Object, the verb concerned takes only the accusative NP, the frame will contain the feature, [... - + NP ^ acc.c - ...].

These procedures help only in the indication of the strict-sub-categorizational features of the verb concerned, and for the indication of its selectional features other procedures are needed. Although the verb can, strictly speaking, be sub-categorized in terms of selectional features which appear in any position in the string, below, the only positions in which selectional features are indicated will be the subject, object and, at times, Rec positions. In the first two cases the indication of selectional

features causes no problems. The subject NP will carry no case markers, while the object NP will carry the accusative case marker, so that there will be an unambiguous indication as to which NP in the string is being dealt with. Thus if a particular frame contains the feature [... - [+ N, + Anim, ...] ^ + acc.c - ...], this will unambiguously mean that the verb concerned must take an Animate noun as Object. In the case of Rec, however, the mere addition of the dative case marker will not suffice to indicate which position in the string is being dealt with, since NPs in other positions too take the dative case marker in the base. To overcome this difficulty, the rewrite symbol, →, is made use of. If, therefore, a verb can take only an Animate noun in Rec position, the frame of its complex symbol in the entry will contain the feature [... + Rec → [+ N, + Anim, ...] ^ + dat.c - ...].

Certain of the cooccurrence restrictions on a verb may be affected by the cooccurrence relations between its subject and Object NPs. Thus a verb may have to take an Animate noun as Object if it takes an Inanimate non-Time noun as subject, and vice versa. This problem is attended to with the help of the square brackets used for conflation as follows. The frame of the complex symbol of the verb described will contain the features [... - [+ N, $\begin{bmatrix} + \text{Anim} \\ - \text{Time} \end{bmatrix}$, ...] - ... - [+ N, $\begin{bmatrix} - \text{Time} \\ + \text{Anim} \end{bmatrix}$, ...] ^ + acc.c - ...].

At times, the conflationary square brackets will be found to contain the symbol, - - -, alternating with other elements. This means that when a verb chooses the item corresponding with - - - in a preceding or following pair of square brackets, it is negatively specified with regard to the features which this particular pair of square brackets is concerned with. Thus the verb nata below, for example, is specified by means of this device as taking the expansion Substit only when it has a Temporal or Animate NP as subject, and not when it has a non-Temporal NP.

Implied in some of what has been said above is the further convention that the elements mentioned in any given frame are treated as variables ranging in each case over all the nodes developed from them in the base rules. If, therefore, a frame contains the feature, [... - + Aux_{Asp} - ...], it implies that the verb concerned could take any or all of the items developed from Aux_{Asp} in the PS rules. The order of their occurrence, the possibilities of combination among them, and the question whether they are optional or not are all decided by what has been specified in the PS rules.

Chomsky's convention regarding "hierarchic sequences"[4] is also made use of below in all places but one. To deal with the general case before the exception, if the subject noun of a verb is characterized by (among other things) the features [+ Count, - Anim, - Temp], it is not necessary, in terms of the convention, to list all these features since they form a hierarchic sequence in

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4. Chomsky(1965), pp. 165-166.

the grammar. It is sufficient to indicate merely the feature [- Temp], since the other features can be predicted from this. The only exception to this practice below is when the major sub-class to which each verb belongs is indicated. (This constitutes the first part of the complex symbol G in each case.) In terms of the convention elsewhere adopted this is unnecessary, but for the pragmatic and non-theoretical reason that it helps to avoid the necessity of studying the entire complex symbol before discovering which major sub-class a verb belongs to it is retained.

The discussion above reveals that in deciding which items a lexical entry lists it is basically the second of the four conventions Chomsky proposes as alternatives[5] that the present work adopts. According to this convention, the lexicon lists "only those features corresponding to frames in which the item can appear", any such item being negatively specified "for every contextual feature not mentioned in its lexical entry." In the case of the syntactic features of nominals, however, + or - will have the values assigned to them in the PS rules, whereby [- Thd P], for example, implies [+ $\begin{Bmatrix} \text{Fst P} \\ \text{Scd P} \end{Bmatrix}$]. Certain other qualifications of the general convention adopted are also necessary. The first of these concerns the element vo. In the entries of every pair of volitively related verbs, the frame of the involitive verb will carry the feature [- vo], while the frame of the volitive verb will carry the feature [+ vo]. This is necessary because the involitive verb in a pair of volitively related verbs

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5. Chomsky(1965), p. 111.

must be distinguished from verbs which do not enter into the relationship of volition at all, the opposition being between involitive verbs and non-volitive verbs.

A second qualification relates to elements marked ± in the frames. This symbol helps to distinguish those items that the verb concerned takes optionally, like Time or Loc, for example, from those it takes obligatorily. Thus a transitive verb belonging to the sub-class V will have its features specified as follows: [+ V, + ... - ± Time - ± Loc - ... - + Object - ___ - + Tense - ...]. The blank in such entries indicates the point in the frame in which D will actually be inserted. The practice just described will have certain implications for the redundancy rules Chomsky discusses[6], but these will not be taken into account below. By allowing for controlled combination among the elements specified, however, it helps to collapse together every conceivable frame in which the items concerned may appear. If any one of these frames is not distinct from the frame of a complex symbol in an actual pre-terminal string, the lexical item whose features it (among other frames) specifies will be substituted for that complex symbol, a process which will result in a terminal string.

It might finally be mentioned that there are many factors regarding co-occurrence restrictions which cannot be attended to since they involve idiosyncratic points which do not lend themselves to generalization. At times an attempt has been made to

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6. Chomsky(1965), pp. 167, 168.

throw some light on the kinds of restrictions involved by mentioning certain of the actual lexical items which could occur in a given position. On the whole, however, such details have been left unaccounted for.

aaka [+ $V_{Cop\ Iden'}$ + ± Q - ± Emp - + NP - ± Implic - ± Partic - ± T_{AD} - ± Loc - ± Substit - ± Result - ± Man Comp - ± M_{Advb} - + Comp - ___ - ± Neg] "be"

aaka
- aaka [+ $V_{Cop\ Act'}$ + ± {Q, Imp} - ± Emp - + NP - ± Implic - ± Time - ± Loc - ± Substit - ± Result - ± Represen - ± Method - ± Man Comp - ± M_{Advb} - + Comp - ___ - - vo - ± Aux_A - + Particle - ± Neg] "become"
- aakka [+ $V_{Cop\ Act'}$ + ± {Q, Imp} - ± Emp - + NP - ± Implic - ± Time - ± Loc - ± Substit - ± Result - ± Represen - ± Method - ± Man Comp - ± M_{Advb} - + NP ^+acc.c -

+ Comp - ___ - + vo - ± c -- ± Passive -

± Aux_{Asp} - + Particle - ± Neg] "make" (in

"We made him our leader.")

aaka [+ V_{Pos}, + ± Q - ± Emp - + ± Qual ^ [$\begin{Bmatrix} + \text{N} \\ + \text{Thd P} \end{Bmatrix}$,

+ Abst] ^ ± mattum - ± Implic - ± Implic - ± Partic -

$\begin{bmatrix} \pm \text{Loc} \\ + \text{Loc} \end{bmatrix}$ - ± Result - ± Man Comp - ± M_{Advb} -

$\begin{bmatrix} + \text{Rec} \\ \pm \text{Rec} \end{bmatrix}$ → + ± Qual ^ [$\begin{Bmatrix} + \text{N} \\ \pm \text{Thd P} \end{Bmatrix}$, $\begin{Bmatrix} + \text{Anim} \\ - \text{Temp} \rightarrow \underline{\text{naatu}} \end{Bmatrix}$

"land", ... $\Big\}$, + $\begin{Bmatrix} \text{Sg} \\ \text{Pl} \end{Bmatrix}$, ± Common] ^ ± mattum ^ + dat.c -

± Cont - ± Topic - ___ - ± Neg] "be" (in a

possessive sense)

aala [+ V, + ± $\begin{Bmatrix} \text{Q} \\ \text{Imp} \end{Bmatrix}$ - ± Emp - + ± Qual ^ [$\begin{Bmatrix} + \text{N} \\ \pm \text{Thd P} \end{Bmatrix}$,

+ Anim, + $\begin{Bmatrix} \text{Sg} \\ \text{Pl} \end{Bmatrix}$, ± Common] ^ ± mattum - ± Implic -

± Time - ± Loc - ± Substit - ± Result - ± Represen -

± Method - ± Man Comp - ± M_{Advb} - ± Com_1 -

+ ± Qual ^ [$\begin{Bmatrix} + \text{N} \\ \pm \text{Thd P} \end{Bmatrix}$, $\begin{Bmatrix} + \text{Anim} \\ - \text{Temp} \rightarrow \underline{\text{naatu}} \text{ "land",...} \end{Bmatrix}$ ^

± mattum ^ + acc.c - ___ - ± Passive - ± {Antic / Reten} -

± Aux_A - + Particle - ± Neg, ± Obj Del] "rule" (in

"He ruled the country.")

aatu

- aatu [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^

[{+ N / ± Thd P}, {+ Anim / - Temp / - Abst}, + {Sg / Pl}, ± Common] ^

mattum - ± Implic - ± Time - ± Loc -

± Substit - ± Result - ± Represen - ± Agent →

NP ^ {ootu / utan} - ± Man Comp - ± MA - ___ -

- vo - ± {Antic / Reten} - ± {Real / Contin / Progres} - ± {Perf / Futur} -

+ Particle - ± Neg] "move, shake, dance"

- aattu [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^

[{+ N / ± Thd P}, {+ Anim / - Temp → yantiram "machine",...},

+ {Sg / Pl}, ± Common] ^ ± mattum - ± Implic -

± Time - ± Loc - ± Substit - ± Result -

± Represen - ± Method - ± Man Comp - ± MA -

± Com_1 - + ± Qual ^ [{+ N / ± Thd P}, {+Anim / -Temp / -Abst},

± Common] ^ ± mattum ^ + acc.c - ___ - + vo -

± c - ± Passive - ± {Antic / Reten} - ± Aux_A -

+ Particle - ± Neg] "move, shake"

ali

ali [+ V, + ± Q - ± Emp - + ± Qual ^ [{+ N / ± Thd P},

{+ Anim / - Temp / - Count}, + {Sg / Pl}, ± Common] ^ mattum - ± Implic -

± Time - ± Loc - ± Result - ± Man Comp -

± M_{Advb} - ___ - - vo - ± Antic - ± {Contin / Progres} -

± Au_A - + Particle - ± Neg] "get destroyed"

ali [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^

[{+ N / ± Thd P}, {+ Anim / - Temp → sankam "society",...},

+ {Sg / Pl}, ± Common] ^ mattum - ± Implic - ± Time -

± Loc - ± Substit - ± Result - ± Represen -

$\pm$ Method - $\pm$ Man Comp - $\pm$ M_{Advb} - $\pm$ Com_1 -

+ $\pm$ Qual ^ [$\begin{Bmatrix} + N \\ \pm Thd\ P \end{Bmatrix}$, $\begin{Bmatrix} + Anim \\ - Temp \\ - Count \end{Bmatrix}$, + $\begin{Bmatrix} Sg \\ Pl \end{Bmatrix}$,

$\pm$ Common] ^ $\pm$ mattum ^ + acc.c - ___ - + vo -

$\pm$ c - + Modif] "destroy, wipe out"

aḷi [+ V, + $\pm$ $\begin{Bmatrix} Q \\ Imp \end{Bmatrix}$ - $\pm$ Emp - + $\pm$ Qual ^ [$\begin{Bmatrix} + N \\ \pm Thd\ P \end{Bmatrix}$,

$\begin{Bmatrix} + Anim \\ - Temp \rightarrow \text{saṉkam "society",...} \end{Bmatrix}$, + $\begin{Bmatrix} Sg \\ Pl \end{Bmatrix}$, $\pm$ Common] ^

$\pm$ mattum - $\pm$ Implic - $\pm$ Time - $\pm$ Loc - $\pm$ Substit -

$\pm$ Result - $\pm$ Represen - $\pm$ Method - $\pm$ Man Comp -

$\pm$ M_{Advb} - $\pm$ Com_1 - + Rec → + $\pm$ Qual ^ [$\begin{Bmatrix} + N \\ \pm Thd\ P \end{Bmatrix}$,

$\begin{Bmatrix} + Anim \\ - Temp \end{Bmatrix}$, + $\begin{Bmatrix} Sg \\ Pl \end{Bmatrix}$, $\pm$ Common] ^ $\pm$ mattum ^ dat.c -

+ $\pm$ Qual ^ [$\begin{Bmatrix} + N \\ \pm Thd\ P \end{Bmatrix}$, $\begin{Bmatrix} + Anim \\ - Temp \\ - Count \end{Bmatrix}$, + $\begin{Bmatrix} Sg \\ Pl \end{Bmatrix}$, $\pm$ Common] ^

$\pm$ mattum ^ + acc. c - ___ - $\pm$ c - $\pm$ Passive -

$\pm$ $\begin{Bmatrix} Antic \\ Complet \end{Bmatrix}$ - $\pm$ Aux_A - + Particle - $\pm$ Neg] "give"

aḷu [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P}, + Anim, + {Sg / Pl}, ± Common] ^ ± mattum - ± Implic - ± Time - ± Loc - ± Substit - ± Result - ± MA - ± Topic - ___ - ± c - ± {Antic / Reten} - ± {Real / Contin / Progres} - ± {Perf / Futur} - + Particle - ± Neg] "cry"

anuppu [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P}, {+ Anim / - Temp → aṉkam "society",...}, + {Sg / Pl}, ± Common] ^ ± mattum - ± Implic - ± Time - ± Loc - ± Substit - ± Result - ± Represen - ± Method - ± Man Comp - ± M_{Advb} - ± Recip - + ± Qual ^ [{+ N / ± Thd P}, {+ Anim / - Temp / - Abst}, + {Sg / Pl}, ± Common] ^ ± mattum ^ + acc.c - ___ - ± c - + Modif] "send"

aRi

aRi [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^
[{+ N / ± Thd P}, {+ Anim / - Temp → saṉkam "society",...},
+ {Sg / Pl}, ± Common] ^ ± maṯṯum - ± Implic -
± Time - ± Loc - ± Result - ± Means -
± Man Comp - ± MA - ± Topic - + {NP ^ acc.c / S In Gen / Fact Obj} -
___ - - vo - ± Passive - ± {Antic / Reten} - ± Real -
± {Perf / Futur / Conclu} - + Particle - ± Neg] "know, get
to know"

aRivi [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^
[{+ N / ± Thd P}, {+ Anim / - Temp → saṉkam "society",...},
+ {Sg / Pl}, ± Common] ^ ± maṯṯum - ± Implic -
± Time - ± Loc - ± Substit - ± Result -
± Represen - ± Method - ± Man Comp - M_{Advb} -
± Com_1 - + Rec → + ± Qual ^ [{+ N / ± Thd P},

$$\left\{\begin{matrix}+\text{ Anim}\\ -\text{ Temp} \rightarrow \underline{\text{saŋkam}}\text{ "society",...}\end{matrix}\right\}\text{ , }+\left\{\begin{matrix}\text{Sg}\\ \text{Pl}\end{matrix}\right\}\text{ ,}$$

$$\pm\text{ Common] } \hat{}\ \pm\ \underline{\text{mattum}}\ \hat{}\ +\text{ dat.c - }\pm\text{ Topic -}$$

$$+\left\{\begin{matrix}\pm\text{ Qual } \hat{}\ [\ \left\{\begin{matrix}+\text{ N}\\ +\text{ Thd P}\end{matrix}\right\}\text{, }\left\{\begin{matrix}-\text{ Time} \rightarrow \underline{\text{seyti}}\text{ "news",..}\\ +\text{ Abst}\end{matrix}\right\}\\ +\text{ Gen Nom}\end{matrix}\right.$$

$$\left.+\left\{\begin{matrix}\text{Sg}\\ \text{Pl}\end{matrix}\right\}\ ]\right\}\ \hat{}\ \underline{\text{mattum}}\ \hat{}\ +\text{ acc.c - \_\_\_ - + vo -}$$

$$\pm\text{ c - + Modif] "announce, make known"}$$

$$\underline{\text{assăti}}\quad [\ +\text{ V, + }\pm\left\{\begin{matrix}\text{Q}\\ \text{Imp}\end{matrix}\right\}\text{ - }\pm\text{ Emp - + }\pm\text{ Qual } \hat{}\ [\ \left\{\begin{matrix}+\text{ N}\\ \pm\text{ Thd P}\end{matrix}\right\}\text{,}$$

$$\left\{\begin{matrix}+\text{ Anim}\\ -\text{ Temp} \rightarrow \text{saŋkam "society",...}\end{matrix}\right\}\text{ , }+\left\{\begin{matrix}\text{Sg}\\ \text{Pl}\end{matrix}\right\}\text{ , }\pm\text{ Common] } \hat{}$$

$$\pm\ \underline{\text{mattum}}\text{ - }\pm\text{ Implic - }\pm\text{ Time - }\pm\text{ Loc - }\pm\text{ Substit -}$$

$$\pm\text{ Result - }\pm\text{ Represen - }\pm\text{ Method - }\pm\text{ Man Comp -}$$

$$\pm\ \text{M}_{\text{Advb}}\text{ - }\pm\text{ Cont - }\pm\text{ Topic - + }\pm\text{ Qual } \hat{}$$

$$[\ \left\{\begin{matrix}+\text{ N}\\ +\text{ Thd P}\end{matrix}\right\}\text{, - Temp} \rightarrow \underline{\text{puttakam}}\text{ "book",... , }+\left\{\begin{matrix}\text{Sg}\\ \text{Pl}\end{matrix}\right\}\ ]\ \hat{}$$

$$\pm\ \underline{\text{mattum}}\ \hat{}+\text{acc.c - \_\_\_ - }\pm\text{ c - + Modif] "print"}$$

aṭay [+ V, + ± {Q / Imp} - ± Emp - + Noun ^ ± maṭṭum -

± Implic - ± Time - ± Loc - ± Substit - ± Result -

± Represen - ± {Means / Agent → NP ^ aal} - ± Man Comp -

± M_{Advb} - ± Com_1 - ± Cont - + ± Qual ^ [{+ N / + Thd P}, {- Temp → ilaṅkay "Ceylon",... / + Abst}, + {Sg / Pl}] ^ ± maṭṭum ^

+ acc.c - ___ - ± Passive - ± {Antic / Reten} - ± Aux_A -

+ Particle - ± Neg] "reach, achieve"

eesu [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P}, - Neut, + {Sg / Pl}, ± Common] ^ ± maṭṭum - ± Implic -

± Time - ± Loc - ± Substit - ± Result - ± Represen -

± Method - ± Man Comp - ± MA - ± Topic - + ± Qual ^

[{+ N / ± Thd P}, + Anim, + {Sg / Pl}, ± Common] ^ ± maṭṭum ^

+ acc.c - ___ - ± c - + Modif, ± Obj Del]

"scold"

e]u

e]umpu [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^

[{+ N / ± Thd P} , {- Temp / + Anim / - Count} , + {Sg / Pl} , ± Common] ^

± mat̲t̲um - ± Implic - ± Time - ± Loc -

± Substit - ± Result - ± Method - ± Man Comp -

± MA - ± Com_1 - ± Destin - ___ - - vo -

± {Antic / Reten} - ± Aux_A - + Particle - ± Neg]

"rise"

e]uppu [+ V, + ± {Q / Imp} - ± Emp - +

e]uppu

[+ NP

+ ± Qual ^ [{+ N / ± Thd P} , {+ Anim / - Temp / + Abst} , + {Sg / Pl} ,

± Common] ^ ± mat̲t̲um] - ± Implic - ± Time -

± Loc - ± Substit - ± Result - ± Represen -

± Method - ± Man Comp - ± MA - ± Comm -

± Destin - + ± Qual ^ [{+ N / ± Thd P}, [{+ Anim / + Abst}, {+ Anim / - Temp / - Count}],

+ {Sg / Pl}, ± Common] ^ ± mattum ^+acc.c - ___ -

+ vo - ± c - + Modif] "raise, rouse, lift"

elutu [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P},

- Neut, + {Sg / Pl}, ± Common] ^ ± mattum - ± Implic -

± Time - ± Loc - ± Substit - ± Result - ± Represen -

± Method - ± Man Comp - ± MA - ± Rec - ± Cont -

± Topic - + ± Qual ^ [{+ N / + Thd P}, - Temp → puttakam

"book",... , + {Sg / Pl}] ^ ± mattum ^+acc.c - ___ - ± c -

+ Modif , ± Obj Del] "write"

ena [+ V, + ± Q - ± Emp - + ± Qual ^ [{+ N / ± Thd P},

{- Temp → arasaaŋkam "the Government",... / + Anim}, + {Sg / Pl},

± Common] ^ ± mat̲t̲um - ± Implic - ± Time - ± Loc -

± Substit - ± Result - ± Represen - ± {Means / Agent → NP ^ aal} -

± Man Comp - ± M_{Advb} - ± Rec - ± Topic - + Quotat -

___ - ± Passive - ± Perf - + Tense - ± Neg] "say"

iru [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P}, + Anim, + {Sg / Pl}, ± Common] ^ ± mat̲t̲um - ± Implic -

± Time - ± Loc - ± Substit - ± Result - ± Represen -

± Agent → NP ^ {oot̲u / ut̲an} - ± Man Comp - ± M_{Advb} - ___ -

± c - ± {Antic / Reten} - ± Real - ± Au_{A} - + Particle -

± Neg] "sit"

iru [+ V_{Pos}, + ± {Q / Imp} - ± Emp - + Noun ^ ± mat̲t̲um -

± Implic - ± Time - ± Loc - ± Substit → NP ^ aaka -

± Result - ± Agent → NP ^ {oot̲u / ut̲an} - ± Mann - ± M_{Advb} -

± Rec - ___ - ± Real - + {Aux_{TM} / Subjunc} - ± Neg] "have, be"

iRa [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P}, + Anim, + {Sg / Pl}, ± Common] ^ ± mattum - ± Implic - ± Time - ± Loc - ± Substit → NP ^ aaka - ± Result - ± Represen - ± Agent - ± Man Comp - ± M_{Advb} - ___ - ± Antic - ± Real - ± Au_A - + Particle - ± Neg] "die"

iRa —

- iRaṉku [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P}, {- Temp / + Anim / - Abst}, + {Sg / Pl}, ± Common] ^ ± mattum - ± Implic - ± Time - ± Loc - ± Substit - ± Result - ± Represen - ± Method - ± Man Comp - ± MA - ± Com_1 - ± Destin - ± Cont - ___ - - vo - ± {Antic / Reten} - ± Real - ± Au_A - + Particle - ± Neg] "descend"
- iRakku [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P}, {+ Anim / - Temp → paarantuukki "crane",..} ,

$$+\left\{\begin{matrix}\text{Sg}\\ \text{Pl}\end{matrix}\right\},\ \pm\ \text{Common}\ ]\ \hat{}\ \pm\ \underline{\text{mattum}}\ -\ \pm\ \text{Implic}\ -\ \pm\ \text{Time}\ -$$

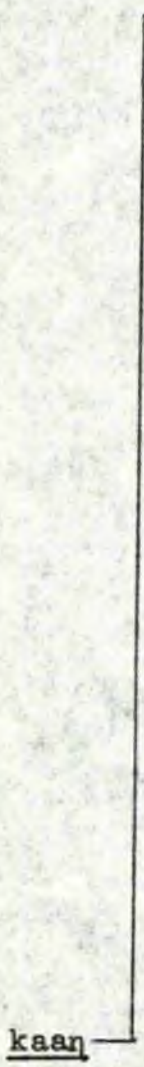
$$\pm\ \text{Loc}\ -\ \pm\ \text{Substit}\ -\ \pm\ \text{Result}\ -\ \pm\ \text{Represen}\ -$$

$$\pm\ \text{Method}\ -\ \pm\ \text{Man Comp}\ -\ \pm\ \text{MA}\ -\ \pm\ \text{Comm}\ -\ \pm\ \text{Destin-}$$

$$\pm\ \text{Cont}\ -\ +\ \pm\ \text{Qual}\ \hat{}\ [\left\{\begin{matrix}+\ \text{N}\\ \pm\ \text{Thd P}\end{matrix}\right\},\left\{\begin{matrix}+\ \text{Anim}\\ -\ \text{Temp}\\ -\ \text{Abst}\end{matrix}\right\},+\left\{\begin{matrix}\text{Sg}\\ \text{Pl}\end{matrix}\right\},$$

$$\pm\ \text{Common}\ ]\ \hat{}\ \pm\ \underline{\text{mattum}}\ \hat{}+\text{acc.c}\ -\ \_\_\_\ -\ +\ \text{vo}\ -$$

$$\pm\ \text{c}\ -\ +\ \text{Modif}\ ]\quad \text{"lower"}$$



$$\underline{\text{kaaṇ}}\quad [\ +\ \text{V},\ +\ \pm\left\{\begin{matrix}\text{Q}\\ \text{Imp}\end{matrix}\right\}\ -\ \pm\ \text{Emp}\ -\ +\ \pm\ \text{Qual}\ \hat{}$$

$$[\left\{\begin{matrix}+\ \text{N}\\ \pm\ \text{Thd P}\end{matrix}\right\},\left\{\begin{matrix}+\ \text{Anim}\\ -\ \text{Temp}\rightarrow \underline{\text{ulakam}}\ \text{"the world",...}\end{matrix}\right\},$$

$$+\left\{\begin{matrix}\text{Sg}\\ \text{Pl}\end{matrix}\right\},\ \pm\ \text{Common}\ ]\ \hat{}\ \pm\ \underline{\text{mattum}}\ -\ \pm\ \text{Implic}\ -\ \pm\ \text{Time-}$$

$$\pm\ \text{Loc}\ -\ \pm\ \text{Result}\ -\ \pm\ \text{Method}\ -\ \pm\ \text{Man Comp}\ -$$

$$\pm\ \text{M}_{\text{Advb}}\ -\ \pm\ \text{Com}_1\ -\ \pm\ \text{Topic}\ -\ +\left\{\begin{matrix}+\ \text{Gen Nom}\\ \pm\ \text{Qual}\ \hat{}\\ [\left\{\begin{matrix}+\ \text{N}\\ \pm\ \text{Thd P}\end{matrix}\right\},\left\{\begin{matrix}+\ \text{Anim}\\ -\ \text{Temp}\\ -\ \text{Abst}\end{matrix}\right\},+\left\{\begin{matrix}\text{Sg}\\ \text{Pl}\end{matrix}\right\},\ \pm\ \text{Common}\ ]\end{matrix}\right\}\hat{}\pm\text{mattum}\hat{}$$

$$+\ \text{acc.c}\ -\ \_\_\_\ -\ -\ \text{vo}\ -\ \pm\ \text{c}\ -\ \pm\ \text{Passive}\ -$$

$$\pm\ \text{Antic}\ -\ \pm\ \text{Real}\ -\ \pm\left\{\begin{matrix}\text{Perf}\\ \text{Futur}\\ \text{Conclu}\end{matrix}\right\}\ -\ +\ \text{Particle}\ -$$

$$\pm\ \text{Neg}\ ]\quad \text{"see"}$$

kaaṇ

kaaṉ

└kaaṭṭu [+ V, + ± {Q / Imp} - ± Emp - + NP -

± Implic - ± Time - ± Loc - ± Substit -

± Result - ± Represen - ± Method -

± Man Comp - ± M_{Advb} - ±Com_1 - +Rec - ±Topic

+ { + ± Qual ^ [{+ N / ± Thd P}, {+ Anim / - Temp / - Count}, + {Sg / Pl},
  + $S_{In\ Gen}$ / + Fact Obj
  ± Common] ^ ± maṭṭum ^+acc.c } - ___ - + vo -

± c - + Particle] "show"

kaaṉum [+ V_{Imp}, + ± Q - ± Emp - + Noun - ± Implic -

± Partic - ± Loc - ± Man Comp - ± M_{Advb} -

+ NP ^+acc.c - ___ - ± Neg] "be enough"

kaay

— kaay [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^
[{+ N / ± Thd P}, {+ Anim / - Temp / - Abst}, + {Sg / Pl}, ± Common] ^
± mattum - ± Implic - ± Time - ± Loc -
± Substit → NP ^ aaka - ± Result - ± Man Comp -
± MA - ___ - - vo - ± {Antic / Reten} - ± Aux_A -
+ Particle - ± Neg] "dry, ripen, get burned (in the sun)"

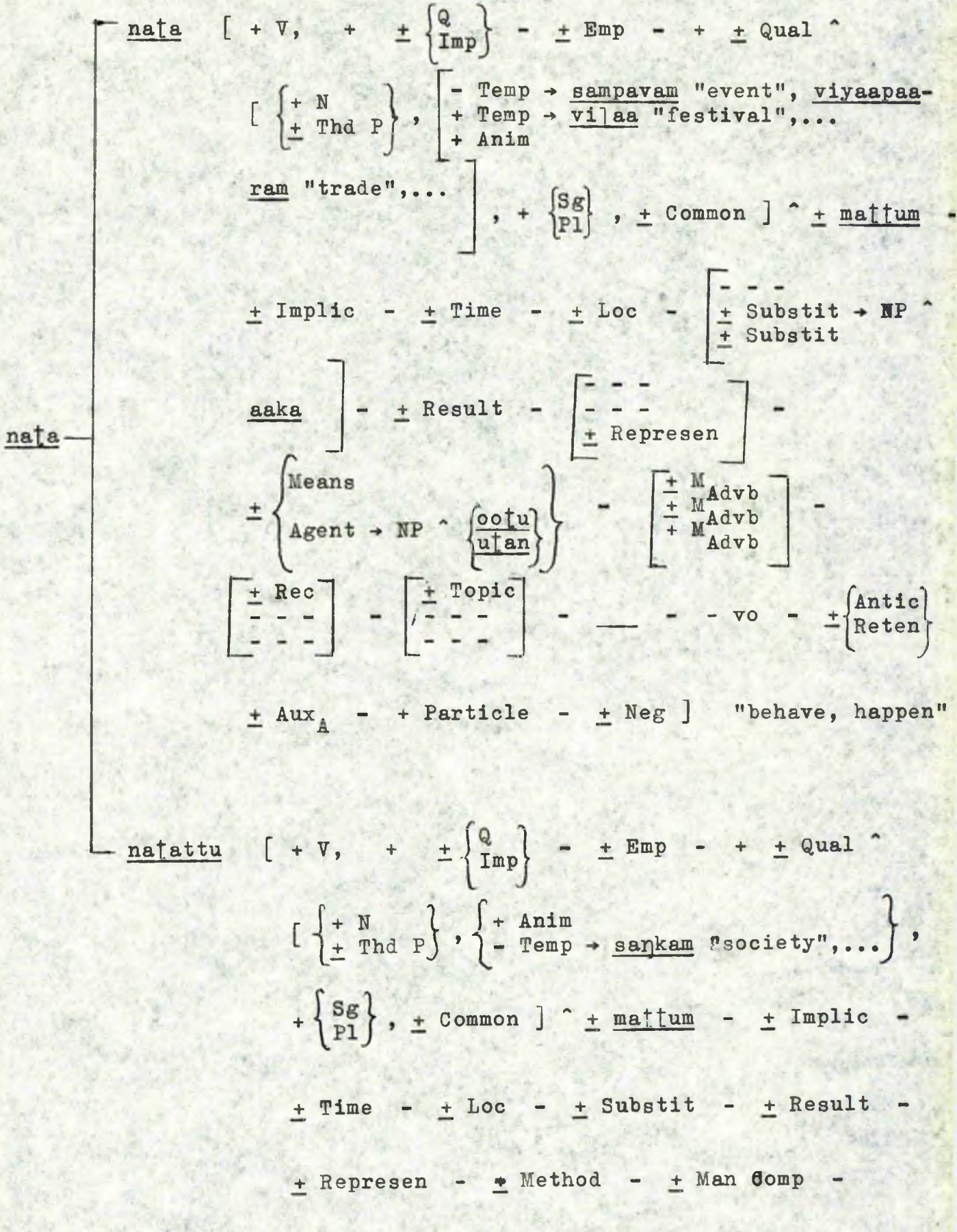
— kaayssu [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^
[{+ N / ± Thd P}, {+ Anim / + Abst → veyyil "sunlight",... / - Temp → suuriyan "sun",...},
+ {Sg / Pl}, ± Common] ^ ± mattum - ± Implic -
± Time - ± Loc - ± Substit - ± Result -
± Represen - ± Method - ± Man Comp - ± MA -
± Com_1 - + ± Qual ^ [{+ N / + Thd P}, {- Temp / - Abst},
+ {Sg / Pl}, ± Common] ^ ± mattum ^+acc.c - ___ -
+ vo - ± c - +Modif] "dry, ripen"

kee] [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P}, - Neut, + {Sg / Pl}, ± Common] ^ ± mattum - ± Implic - ± Time - ± Loc - ± Substit - ± Result - ± Represen - ± Method - ± Man Comp - ± M_{Advb} - ± Com_1 - ± Cont - ± Topic - + {+ Fact Obj → X - Q ^ Y_{Quotat} - Z / ± Qual ^ [{+ N / + Thd P}, - Anim → keelvi "question"; neeram "time",... , + {Sg / Pl}] ^ ± mattum ^ + acc.c} - ___ - + Modif] "ask"

kitay [+ V, + ± Q - ± Emp - + ± Qual ^ [{+ N / + Thd P}, {+ Anim / + Temp / - Count}, + {Sg / Pl}] ^ ± mattum - ± Implic - ± Time - ± Loc - ± Substit → NP ^ aaka - ± Result - ± {Means / Agent → NP ^ aal} - ± Man Comp - ± M_{Advb} - + Rec - ___ - ± Antic - ± Real - ± {Perf / Futur} - ± Subjunc - + Aux_{TM} - ± Neg] "receive, obtain"

maRa [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P}, {- Temp → ulakam "the world",... / + Anim}, + {Sg / Pl}, ± Common] ^ ± mattum - ± Implic - ± Time - ± Loc - ± Substit → NP ^ aaka - ± Result - ± Man Comp - ± M_{Advb} - ± Topic - + {NP ^ acc.c / $S_{In\ Gen}$ / Fact Obj} - ___ - ± Passive - ± {Antic / Reten} - ± Au_A - + Particle - ± Neg] "forget"

naṭa [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P}, + Anim, + {Sg / Pl}, ± Common] ^ ± mattum - ± Implic - ± Time - ± Loc - ± Substit - ± Result - ± Represen - ± Method - ± Man Comp - ± MA - ± Com_1 - ± Destin - ___ - ± c - ± {Antic / Reten} - ± Real - ± {Perf / Futur / Conclu} - + Particle - ± Neg] "walk"


naṭa
naṭa [+ V, + ± {Q, Imp} - ± Emp - + ± Qual ^
[{+ N, ± Thd P}, [- Temp → sampavam "event", viyaapaaram "trade",... + Temp → viḻaa "festival",... + Anim] , + {Sg, Pl} , ± Common] ^ ± maṭṭum -
± Implic - ± Time - ± Loc - [- - - ± Substit → NP ^ ± Substit] aaka] - ± Result - [- - - - - - ± Represen] -
± {Means, Agent → NP ^ {ooṭu, uṭan}} - [± M Advb, ± M Advb, + M Advb] -
[± Rec - - - - - -] - [± Topic - - - - - -] - ___ - - vo - ± {Antic, Reten}
± Aux A - + Particle - ± Neg] "behave, happen"
naṭattu [+ V, + ± {Q, Imp} - ± Emp - + ± Qual ^
[{+ N, ± Thd P}, {+ Anim, - Temp → saṅkam "society",...} ,
+ {Sg, Pl} , ± Common] ^ ± maṭṭum - ± Implic -
± Time - ± Loc - ± Substit - ± Result -
± Represen - ± Method - ± Man Comp -

$\pm$ M_{Advb} - $\pm$ Com_1 - $\pm$ Topic - + $\pm$ Qual ^ [$\left\{\begin{matrix}+\text{ N}\\+\text{ Thd P}\end{matrix}\right\}$,

$\left\{\begin{matrix}+\text{ Temp} \rightarrow \underline{\text{vi}}\underline{\text{laa}}\text{ "festival",...}\\-\text{ Temp} \rightarrow \underline{\text{viyaapaaram}}\text{ "trade",...}\end{matrix}\right\}$, + $\left\{\begin{matrix}\text{Sg}\\\text{Pl}\end{matrix}\right\}$] ^ $\pm$ <u>ma‖um</u> ^

+ acc.c - ___ - + vo - $\pm$ c - + Modif] "conduct"

oo‖u — <u>oo‖u</u> [+ V, + $\pm$ $\left\{\begin{matrix}\text{Q}\\\text{Imp}\end{matrix}\right\}$ - $\pm$ Emp - + $\pm$ Qual ^

[$\left\{\begin{matrix}+\text{ N}\\\pm\text{ Thd P}\end{matrix}\right\}$, $\left\{\begin{matrix}+\text{ Anim}\\-\text{ Temp} \rightarrow \underline{\text{kaar}}\text{ "car"}\end{matrix}\right\}$, + $\left\{\begin{matrix}\text{Sg}\\\text{Pl}\end{matrix}\right\}$,

$\pm$ Common] ^ $\pm$ <u>ma‖um</u> - $\pm$ Implic - $\pm$ Time -

$\pm$ Loc - $\pm$ Substit $\rightarrow$ NP ^ <u>aaka</u> - $\pm$ Result -

$\pm$ Represen - $\pm$ Method - $\pm$ Man Comp - $\pm$ MA -

$\pm$ Com_1 - $\pm$ Destin - ___ - - v● - $\pm$ $\left\{\begin{matrix}\text{Antic}\\\text{Reten}\end{matrix}\right\}$ -

$\pm$ Real - $\pm$ $\left\{\begin{matrix}\text{Perf}\\\text{Futur}\\\text{Conclu}\end{matrix}\right\}$ - + Particle - $\pm$ Neg]

"run"

<u>oo‖‖u</u> [+ V, + $\pm$ $\left\{\begin{matrix}\text{Q}\\\text{Imp}\end{matrix}\right\}$ - $\pm$ Emp - + $\pm$ Qual ^

[$\left\{\begin{matrix}+\text{ N}\\\pm\text{ Thd P}\end{matrix}\right\}$, $\left\{\begin{matrix}-\text{ Neut}\\+\text{ Abst} \rightarrow \underline{\text{minsaaram}}\text{ "electricity",..}\end{matrix}\right\}$,

+ $\left\{\begin{matrix}\text{Sg}\\\text{Pl}\end{matrix}\right\}$, $\pm$ Common] ^ $\pm$ <u>ma‖um</u> - $\pm$ Implic - $\pm$ Time -

$\pm$ Loc - $\pm$ Substit - $\pm$ Result - $\pm$ Represen -

± Method - ± Man Comp - ± MA - ± Comm - ± Destin -

+ ± Qual ^ [{+ N / ± Thd P}, {+ Anim / - Temp → kaar "car",...},

+ {Sg / Pl}, ± Common] ^ ± mattum ^ + acc.c - ___ - + vo -

± c - + Modif] "drive, make run"

paay [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^

[{+ N / ± Thd P}, {+ Anim / - Abst → tannaar "water"}, + {Sg / Pl},

± Common] ^ ± mattum - ± Implic - ± Time -

± Loc - ± Substit - ± Result - ± Represen -

± Agent - ± Man Comp - ± MA - ± Com_1 -

± Destin - ___ - - vo - ± {Antic / Reten} - ± Real -

± Real - ± {Perf / Futur / Conclu} - + Particle - ± Neg]

"jump, leap"

paayssu [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^

[{+ N / ± Thd P}, - Neut, + {Sg / Pl}, ± Common] ^

± mattum - ± Implic - ± Time - ± Loc -

± Substit - ± Result - ± Represen -

± Method - ± Man Comp - ± MA - ± Comm - ± Destin -

+ ± Qual ^ [{ + N / + Thd P } , - Abst → tanŋiir "water",...] ^

± maṯṯum ^ + acc.c - ___ - + vo - ± c - ± Passive -

± { Antic / Reten } - ± Aux_A - + Particle - ± Neg] "make flow"

paṯi [+ V, + ± { Q / Imp } - ± Emp - + ± Qual ^

[{ + N / ± Thd P } , - Neut, + { Sg / Pl } , ± Common] ^ maṯṯum -

± Implic - ± Time - ± Loc - ± Substit → NP ^

aaka - ± Result - ± { Means / Agent → NP ^ { ooṯu / uṯan } } -

± Man Comp - ± MA - ± Cont - ± Topic -

+ { ± Qual ^ [{ + N / + Thd P } , - Temp → puttakam "book",

+ S In Gen / + Fact Obj

siŋkaḷam "Sinhalese",... , + { Sg / Pl }] ^ ± maṯṯum ^ + acc.c } -

___ - - vo - + Modif , ± Obj Del] "study"

paṯi

paṭi

└ paṭippi [+ V, + ± {Q / Imp} - ± Emp -

+ { + Gen Nom
  { ± Qual ^ [{+ N / ± Thd P} , {- Temp→ anupavam / - Neut

"experience",...}; + {Sg / Pl} , ± Common]^± maṭṭum }-

± Implic - ± Time - ± Loc - ± Substit -

± Result - ± Represen - ± Method - ±Man Comp-

± MA - ± Rec - ± Cont - ± Topic -

+ { ± Qual ^ [{+ N / + Thd P} , - Temp → puttakam
  { $ S In Gen
  { + Fact Obj

"book", sinkaḷam "Sinhalese",... , + {Sg / Pl}] ^
± maṭṭum ^ + acc.c }-

___ - + vo - + Modif , ± Obj Del] "teach"

peesu [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P} ,

+ Anim, + {Sg / Pl} , ± Common] ^ ± maṭṭum - ± Implic -

± Time - ± Loc - ± Substit - ± Result - ± Represen -

± Method - ± Man Comp - ± MA - ± Com_1 - ± Rec -

± Cont - ± Topic - + ± Qual ^ [{+ N / + Thd P} , - Temp →

unmay "truth", sinkalam "Sinhalese",... , + {Sg / Pl}] ^

± mattum ^ + acc.c - ___ - ± Passive - ± {Antic / Reten} -

± {Real / Contin / Progres} - ± {Perf / Futur} - + Particle - ± Neg ,

± Obj Del] "speak"

piti [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P} ,

+ Anim, + {Sg / Pl} , ± Common] ^ ± mattum - ± Implic -

± Time - ± Loc - ± Substit - ± Result - ± Represen -

± Method - ± Man Comp - ± M_{Advb} - ± Com_1 - + ± Qual^

[{+ N / ± Thd P} , {+ Anim / - Temp / - Abst} , + {Sg / Pl} , ± Common] ^ ± mattum ^

+ acc.c - ___ - + Modif] "catch"

piṯi [+ V_{Imp}, + ± Q - ± Emp - + ± Qual ^ [{+ N / ± Thd P}, {+ Anim / - Temp → saṉkam "society",...}, + {Sg / Pl}, ± Common] ^ ± maṯṯum - ± Implic - [± Partic / ± Time] - ± Loc - ± Result - ± Man Comp - ± MA - + NP ^ acc.c - ___ - ± {Antic / Reten} - ± Real - ± {Perf / Futur} - [- - - / + {Past / Fut}] - ± Neg]

"take one's fancy"

poo [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P}, {+ Count / - Abst}, + {Sg / Pl}, ± Common] ^ ± maṯṯum - ± Implic - ± Time - ± Loc - ± Substit - ± Result - ± Represen - ± Means - ± Agent - ± Man Comp - ± M_{Advb} - ± Com_1 - ± Destin - ___ - ± Antic - ± Real - ± Au_A - + Particle - ± Neg] "go"

poo̲ṯu [+ V, + ±{Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P} ,

{+ Anim / - Temp → arasaaṉkam "the Government",...} , +{Sg / Pl} ,

± Common] ^ ± maṯṯum - ± Implic - ± Time - ± Loc -

± Substit - ± Result - ± Represen - ± Method -

± Man Comp - ± M_{Advb} - ± Comm - ± Rec - + ± Qual ^

[{+ N / ± Thd P}, {+ Anim / - Temp / - Abst}, +{Sg / Pl}, ± Common] ^ ± maṯṯum ^

+ acc.c - ____ - ± Passive - ±{Antic / Reten} - ± Aux_A -

+ Particle - ± Neg] "put"

se̲y [+ V, + ±{Q / Imp} - ± Emp - + NP - ± Implic - ± Time -

± Loc - ± Substit - ± Result - ± Represen - ± Method -

± Man Comp - ± M_{Advb} - ± Com_1 - ± Rec -

+{+ Causal / ± Qual ^ [{+ N / + Thd P}, - Temp → veelay "work",.. , +{Sg / Pl}]^

± maṯṯum ^ + acc.c} - ___ - ± c - + Modif] "do, make"

sol [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P} ,

{+ Anim / - Temp → saŋkam "society",...} , + {Sg / Pl} , ± Common] ^

± mattum - ± Implic - ± Time - ± Loc - ± Substit -

± Result - ± Represen - ± Method - ± Man Comp -

± M_{Advb} - ± Com_1 - ± Rec - ± Cont - ± Topic -

+ {± Qual ^ [{+ N / + Thd P} , - Temp → katay "story", uŋmay

"the truth",... , + {Sg / Pl}] ^ ± mattum ^ + acc.c } - ___ -

± c - + Modif] "say, tell"

sutu [+ V, + ± Q - ± Emp - + ± Qual ^ [{+ N / ± Thd P} ,

{- Temp / - Abst} , + {Sg / Pl}] ^ ± mattum - ± Implic -

± Time - ± Loc - ± Result - ± Man Comp -

± MA - ___ - - vo - ± Real - ± Futur -

+ Aux_{TM} - ± Neg] "be hot, burn"

sutu

suṭu

suṭu [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^

[{+ N / ± Thd P}, {- Neut / - Temp → saŋkam "society",...},

+ {Sg / Pl}, ± Common] ^ ± maṭṭum - ± Implic -

± Time - ± Loc - ± Substit - ± Result -

± Represen - ± Method - ± Man Comp - ± MA -

± Com_1 - + ± Qual ^ [{+ N / ± Thd P}, {+ Anim / - Temp / - Abst },

+ {Sg / Pl}, ± Common] ^ ± maṭṭum ^ + acc.c - ___ -

+ vo - ± c - + Modif] "burn, bake, shoot"

^ ± maṭṭum

takum [+ V_{Imp} , + ± Q - ± Emp -+ +Noun/ - ± Implic -

± Partic - ± Loc - ± Result - ± Man Comp - MA -

+ {NP ^ acc.c / $S_{In\ Gen}$} - ___ - ± Neg] "suit"

$$
\underline{teri}\ \left[\begin{array}{l}
\underline{teri}\ \ [\ +\ V_{Imp}\ ,\ +\ \left[\begin{array}{l}\pm\ \left\{\begin{array}{l}Q\\Imp\end{array}\right\}\\ \pm\ Q\end{array}\right]\ -\ \pm\ Emp\ -\ +\ \pm\ Qual\ \hat{}\\
\quad [\ \left\{\begin{array}{l}+\ N\\ \pm\ Thd\ P\end{array}\right\},\ \left\{\begin{array}{l}+\ Anim\\ -\ Temp \rightarrow \underline{sa\eta kam}\ \text{"society",..}\end{array}\right\},\\
\quad +\ \left\{\begin{array}{l}Sg\\Pl\end{array}\right\},\ \pm\ Common\ ]\ \hat{}\ \pm\ \underline{mattum}\ -\ \pm\ Implic\ -\\
\quad \left[\begin{array}{l}\pm\ Time\\ \pm\ Partic\end{array}\right]\ -\ \pm\ Loc\ -\ \left[\begin{array}{l}\pm\ Substit \rightarrow NP\ \hat{}\ \underline{aaka}\\ -\ -\ -\ -\ -\end{array}\right]\ -\\
\quad \left[\begin{array}{l}\pm\ Result\\ -\ -\ -\ -\end{array}\right]\ -\ \left[\begin{array}{l}\pm\ \left\{\begin{array}{l}Means\\ Agent \rightarrow NP\ \hat{}\ \underline{aal}\end{array}\right\}\\ -\ -\ -\ -\ -\ -\end{array}\right]\ -\ \pm\ Man\ Comp\ -\\
\quad \pm\ M_{Advb}\ -\ \pm\ Topic\ -\ +\ \left\{\begin{array}{l}+\ NP\ \hat{}\ acc.c\\ +\ S_{In\ Gen}\\ +\ Fact\ Obj\end{array}\right\}\ -\ \underline{\quad}\ -\\
\quad -\ vo\ -\ \left[\begin{array}{l}+\left\{\begin{array}{l}+\ Reten\ -\ \pm\ Real\\ +\ Real\end{array}\right\}\ -\ \pm\left\{\begin{array}{l}Perf\\ Futur\\ Conclu\end{array}\right\}\ -\\ \pm\left\{\begin{array}{l}+\ Reten\ -\ \pm\ Real\\ +\ Real\end{array}\right\}\ -\ \pm\left\{\begin{array}{l}Perf\\ Futur\\ Conclu\end{array}\right\}\ -\end{array}\right.\\
\quad \left.\begin{array}{l}+\ Particle\\ \pm\left\{\begin{array}{l}Past\\ Pres\end{array}\right\}\end{array}\right]\\
\quad -\ \pm\ Neg\ ]\ \ \text{"know"}\\
\underline{terivi}\ \ [\ +\ V,\ +\ \pm\left\{\begin{array}{l}Q\\ Imp\end{array}\right\}\ -\ \pm\ Emp\ -\ +\ \pm\ Qual\ \hat{}
\end{array}\right.
$$

$$\left[\begin{Bmatrix} + \text{ N} \\ \pm \text{ Thd P} \end{Bmatrix}, \begin{Bmatrix} + \text{ Neut} \rightarrow \underline{\text{seytittaal}} \text{ "newspaper",...} \\ - \text{ Neut} \\ - \text{ Temp} \rightarrow \underline{\text{arasaaŋkam}} \text{ "the Government",...} \\ + \text{ Abst} \end{Bmatrix}, \right.$$

$$\left. + \begin{Bmatrix} \text{Sg} \\ \text{Pl} \end{Bmatrix}, \pm \text{ Common } \right] \text{ ^ } \pm \underline{\text{mattum}} - \pm \text{ Implic} - \pm \text{ Time} -$$

$$\pm \text{ Loc} - \pm \text{ Substit} - \pm \text{ Result} - \pm \text{ Represen} -$$

$$\pm \text{ Method} - \pm \text{ Man Comp} - \pm M_{\text{Advb}} - \pm \text{Com}_1 -$$

$$\pm \text{ Rec} \rightarrow \pm \text{ Qual ^ } \left[\begin{Bmatrix} + \text{ N} \\ \pm \text{ Thd P} \end{Bmatrix}, \begin{Bmatrix} + \text{ Anim} \\ - \text{ Temp} \rightarrow \underline{\text{saŋkam}} \text{ "society",} \\ \text{...} \end{Bmatrix}, + \begin{Bmatrix} \text{Sg} \\ \text{Pl} \end{Bmatrix}, \pm \text{ Common } \right] \text{ ^ } \pm \underline{\text{mattum}} \text{ ^ + dat.c} -$$

$$\pm \text{ Topic} - + \begin{Bmatrix} + \text{ NP ^ + acc.c} \\ + \text{ S}_{\text{In Gen}} \end{Bmatrix} - \underline{\quad} - + \text{ vo} - \pm \text{ c} -$$

$$+ \text{ Modif }] \quad \text{"announce, make known"}$$

u] $\left[+ V_{\text{Pos}}, + \pm \text{ Q} - \pm \text{ Emp} - + \text{ +Noun/} - \pm \text{ Implic} - \right.$ ^ ± mattum

$$\pm \text{ Partic} - \begin{bmatrix} \pm \text{ Loc} \\ + \text{ Loc} \end{bmatrix} - \pm \text{ Result} - \pm \text{ Man Comp} - \pm M_{\text{Advb}} -$$

$$\left. \begin{bmatrix} + \text{ Rec} \\ \pm \text{ Rec} \end{bmatrix} - \pm \text{ Cont} - \pm \text{ Topic} - \underline{\quad} - \pm \text{ Neg } \right] \quad \text{"have"}$$

un [+ V, + ± {Q / Imp} - ± Emp - + ± Qual ^ [{+ N / ± Thd P} - Neut, + {Sg / Pl}, ± Common] ^ ± mattum - ± Implic - ± Time - ± Loc - ± Substit → NP ^ aaka - ± Result - ± Method - ± Man Comp - ± M_{Advb} - + ± Qual ^ [{+ N / ± Thd P}, {+ Count / - Abst → sooRu "rice",...}]

un ± mattum ^+acc.c - ___ - - vo - ± c - ± {Antic / Reten} - ± {Real / Contin / Progres} - ± {Perf / Futur / Conclu} - + Particle - ± Neg, ± Obj Del] "eat"

uuttu [+ V, + ± {Q / Imp} - ± Emp - + [+ NP / ± Qual ^ [{+ N / ± Thd P}, - Neut, + {Sg / Pl}, ± Common] ^ ±mattum] ± Implic - ± Time - ± Loc - ± Substit - ± Result - ± Represen - ± Method - ± Man Comp - ± M_{Advb} - ± Com_1 - + Rec → ± Qual ^

$$\left[\begin{array}{l}\left\{\begin{array}{l}+\text{ N}\\ \pm\text{ Thd P}\end{array}\right\}\text{ , }\left\{\begin{array}{l}+\text{ Anim}\\ -\text{ Temp}\rightarrow \underline{\text{sankam}}\text{ "society",...}\end{array}\right\}\\ \left\{\begin{array}{l}+\text{ N}\\ \pm\text{ Thd P}\end{array}\right\}\text{ , }-\text{ Neut}\end{array}\right]\text{ , }+\left\{\begin{array}{l}\text{Sg}\\ \text{Pl}\end{array}\right\}\text{ ,}$$

$$\pm\text{ Common }]\ \hat{}\ \pm\ \underline{\text{mattum}}\ \hat{}\ +\text{ dat.c }-\ +\ \pm\text{ Qual }\hat{}\ [\ \left\{\begin{array}{l}+\text{ N}\\ \pm\text{ Thd P}\end{array}\right\}\text{ ,}$$

$$\left[\begin{array}{l}+\text{ Abst}\rightarrow \underline{\text{koopam}}\text{ "anger",...}\\ \\ \left\{\begin{array}{l}\pm\text{ Coumt, }\pm\text{ Common}\\ -\text{ Abst}\rightarrow \underline{\text{sooRu}}\text{ "rice",...}\end{array}\right\}\end{array}\right]\ ]\ \hat{}\ \pm\ \underline{\text{mattum}}\ \hat{}\ +\text{ acc.c }-$$

$$\underline{\quad}\ -\ +\text{ vo }-\ \pm\text{ c }-\ +\text{ Modif , }\left[\begin{array}{l}-\ -\ -\ -\ -\\ \\ \pm\text{ Obj Del}\end{array}\right]\ ]\quad\text{"feed"}$$

$$\hat{}\ \pm\ \underline{\text{mattum}}$$

$$\underline{\text{vaa}}\quad[\ +\text{ V, }\quad +\quad \pm\left\{\begin{array}{l}\text{Q}\\ \text{Imp}\end{array}\right\}\ -\ \pm\text{ Emp }-\ +\ +\text{Noun/ }-\ \pm\text{ Implic }-$$

$$\pm\text{ Time }-\ \pm\text{ Loc }-\ \pm\text{ Substit }-\ \pm\text{ Result }-\ \pm\text{ Represen }-$$

$$\pm\text{ Method }-\ \pm\text{ Man Comp }-\ \pm\ \mathbf{M}_{\text{Advb}}\ -\ \pm\ \text{Com}_1\ -\ \pm\text{Destin }-$$

$$\pm\text{ Cont }-\ \underline{\quad}\ -\ \pm\text{ Antic }-\ \pm\left\{\begin{array}{l}\text{Perf}\\ \text{Futur}\\ \text{conclu}\end{array}\right\}\ -\ +\text{ Particle }-$$

$$\pm\text{ Neg }]\quad\text{"come"}$$

veeṉṭum [+ V_{Imp} , + ± Q - ± Emp - + Noun ^ ± maṭṭum -

± Implic - ± Partic - ± Loc - ± Substit → NP ^ aaka -

± Man Comp - ± M_{Advb} - + Noun ^ ± maṭṭum ^ + acc.c -

___ - ± Neg] "want"

viṭu [+ V, + ± {Q, Imp} - ± Emp - + ± Qual ^ [{+ N, ± Thd P} ,

[{+ Anim, - Temp → saṉkam "society",...}, + Abst] , + {Sg, Pl} , ± Common] ^

± maṭṭum - ± Implic - ± Time - ± Loc - ± Substit -

± Result - ± Represen - ± Method - ± Man Comp -

± M_{Advb} - [[± Comm, - - - -], - - - - -] - + [[+ Noun ^ ± maṭṭum ^ +acc.c, + Direct C], + Direct C] .

_____ - ± Passive - ± Antic - ± Aux_A - + Particle -

± Neg] "allow, leave, release"

IV

THE TRANSFORMATIONAL RULES

The transformational sub-component consists of "a linear sequence of singulary transformations"[1] which map the deep structures produced by the base sub-component into surface structures. Such a characterization of the transformational sub-component ensures that "the meaning of every sentence is determined uniquely by the operation of projection rules on underlying P-markers. Transformations would be without semantic effects."[2]

The ordering of these transformational rules is, of course, very important, and, where appropriate, the reason for assuming a particular ordering will be stated. In certain instances, however, there appears to be no structural motivation for assuming any particular order. The logic operating in such instances is of the circular chicken-or-the-egg variety, for any argument advanced in favour of a particular ordering can neither be validated nor invalidated, and counter-arguments favouring an alternative ordering are always forthcoming. In such instances, the decision made will generally be arbitrary, though, wherever possible, the criterion of the readability of the rules will be kept in mind. To explicate, as much as possible rules which

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1. Chomsky (1965), p. 134.
2. Katz and Postal (1964), p. 46.

appear to fall into groups (like, for example, the Adverbialization rules) will be kept together; and again, certain trivial rules which appear to be low-level, but which immediately follow from certain high-level rules will, if there is no structural reason to do otherwise, be placed immediately after those rules so that they may be easily apprehended.

The earliest transformational rules are the irregularisation rules; that is, those rules which derive certain of the more important irregular sentence patterns (see discussion of the basic sentence patterns above) from strings containing either a $\underline{V_{Imp}}$ as their main verb, or main verbs which take a Potentive Modal as an expansion. These rules demand a high ordering because, as will become evident presently, the changes made by them are often of relevance to operations carried out by later transformations.

The first rule will be concerned with the irregularisation of strings containing $\underline{V_{Imp}}$. Where a string contains any $\underline{V_{Imp}}$ other than <u>teri</u> "know" as its main verb, it is obligatorily irregularised by the head of its subject NP being assigned the dative case inflection. A sentence illustrating the change is

1. nooyaaḷikku ooyvu veeṇṭum.

"The patient needs rest."

With the acquisition of the dative case inflection, the subject ceases to be in concordial relationship with the verb, which will,

in the Concord rule (T 67) be assigned a neutral inflection -um.

When the V_{Imp} in a string is teri, certain complications arise. The lexicon has indicated that teri can optionally take various auxiliaries as expansions. It has also indicated that teri can optionally take two tense markers, Past and Present, when it occurs without any auxiliaries, and all three, Past, Present and Future, when it occurs with one. These factors are relevant to the behaviour of teri in relation to the Irregularisation transformation. When teri opts not to choose the tense markers, whether it takes an Aspectival auxiliary or not, the irregularisation of the strings in which it appears is obligatory. This is illustrated by

2. rikʃookaaranukku vaRumay ennavenRu teriyum.

"The rickshawman knows what poverty is." ,

which has obligatorily undergone the same processes as 1 above. Where teri inflects for tense, however, the change is at times optional. If the tense marker is not preceded by an auxiliary, the change is obligatory, as is demonstrated by

3. kiɭikku sila takaata soRkaɭ terintatu.

"The parrot knew a few obscene words." ,

in which teri takes the Past tense marker. On the other hand, if the tense marker is preceded by an Aspectival auxiliary, in all cases but one the irregularisation is optional. Thus the irregular sentence

4. elloorukkum avanuṭaya pollaata irakasiyam terintu koṇṭatu.

"Everyone {knew / got to know} his terrible secret." ,

in which teri takes the Reten auxiliary followed by the Past tense marker, has an alternative regular form,

5. elloorum avanuṭaya pollaata irakasiyattay terintu koṇṭaarkaḷ.

In 5, the subject NP remains in the nominative case, and the Concord rule (T 71) will assign the verbal complex the inflections which will put it in number, gender and person concord with this subject.

The exception referred to in the previous paragraph relates to Imperative sentences. The lexicon has indicated that sentences in which teri is the main verb can choose Imp only if this verb takes an Aspectival auxiliary. Where such strings are found, no irregularisation is at all possible, so that the usual form of such Imperative sentences is represented by

6. nii itayt terintu koḷ.

"(You) know this."

T 1 Irregularisation of Strings containing $V_{\underline{Imp}}$ - 1

$$W - NP_{sub} - X - V_{Imp} - Z \Rightarrow$$

$$W - \underline{NP \hat{} dat.c}_{sub} - X - V_{Imp} - Z$$

where $V_{Imp} \neq \underline{teri}$

T 2 Irregularisation of Strings containing $V_{\underline{Imp}}$ - 2

T 2.1 (Optional)

$$W - NP_{sub} - X - \underline{teri} - Asp - Tense - Z \Rightarrow$$

$$W - \underline{NP \hat{} dat.c}_{sub} - X - \underline{teri} - Asp - Tense - Z$$

where $W \not\in Imp$

$\underline{teri} / [+ V_{Imp}, \ldots]$

T 2.2

$$W - NP_{sub} - X - \underline{teri} - \left(\begin{bmatrix} Asp \\ Tense \end{bmatrix}\right) - Z \Rightarrow$$

$$W - \underline{NP \hat{} dat.c}_{sub} - X - \underline{teri} - \left(\begin{bmatrix} Asp \\ Tense \end{bmatrix}\right) - Z$$

where $W \not\in Imp$

$Z \not\in Tense$

$\underline{teri} / [+ V_{Imp}, \ldots]$

The kind of string produced by the rule that accomplishes the irregularisation of strings whose main verb takes a Potentive Modal as an expansion is illustrated by

7. raaman $\left\{\begin{matrix}\text{-ukku}\\\text{-aal}\end{matrix}\right\}$ ettu moḻikaḷ peesak kuuṭum.

"Rama can speak eight languages."

The transformation converts the subject NP of the string into either an instrumental or a dative form by adding to it the particle -aal in the former case or a dative case marker in the latter. As with Ts 1 and 2, the later Concord rule will indicate that where this change has been effected the normal concordial relations between subject and verbal group will not be maintained, and that instead, the verbal complex will be assigned the neutral inflection -um.

If in a string the main verb which takes the Potentive Modal is a V_{Imp}, and if that string has already passed through T 1 or T 2, the changes described cannot take place. In any case, the subject NPs of such strings would already be in the dative case.

T 3 Irregularisation of Strings Containing the Potentive Modal

$$W - NP_{sub} - X - VB\ (Asp)\ Pot - Z \Rightarrow$$

$$W - \underbrace{NP \wedge \left\{\begin{matrix}\text{dat.c}\\\text{-aal}\end{matrix}\right\}}_{sub} - X - VB\ (Asp)\ Pot - Z$$

VB here and in the rules below will be taken as referring to all the major sub-classes of verbs not explicitly excluded by the conditions on the rules or implicitly excluded by the frames defined in them.

Certain of the strings irregularised by T 1 or T2 may subsequently be re-regularised. By re-regularisation is not meant a mere reversion to the previous pattern. Where a string produced by T 1 or T 2 contains one of the V_{Imp} s, teri or piti, followed by one or more Aspectival auxiliaries and a tense marker, its object nominal may optionally be converted into the subject of a new regular sentence, whereupon the original subject NP which, despite its dative case inflection had retained its subject status, will cease to function as subject.[3] The main condition on the object NP is that it must be realized as the first of the sub-classes developed from Object in PS 44, NP ^ acc.c . The acquisition of subject status by this NP is indicated by two facts: the NP

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3. A note on the notion "Subject" is in order here. Chomsky points out that "the notion 'Subject', as distinct from the notion 'NP', designates a grammatical function rather than a grammatical category. It is, in other words, an inherently relational notion." (Chomsky, (1965), p.68). In the light of this statement, the writer's use of the term may be seen to refer to the relations obtaining between a) nominative NPs and VPs in concord with them in regular strings, b) dative NPs and Impersonal VPs in strings produced by Ts 1 or 2, c) dative and instrumental NPs and VPs which contain a Potentive Modal in strings produced by T 3, and d) nominative NPs and Impersonal VPs in strings produced by the re-regularisation rule below.

loses its accusative case inflection, while (as the Concord rule will show) the verb is assigned inflections that put it into number, gender and person concord with the NP. These changes are illustrated by

8. puraṭsik koḷkaykaḷ vaaliparkaḷukku piṭittukoḷḷukinRana.
"Revolutionary theories appeal to young people." ,

which is derived by re-regularising in the manner described,

9. vaaliparkaḷukku puraṭsik koḷkaykaḷ piṭittukkoḷḷum.

As always in such cases, the re-regularised sentence is synonymous with the original sentence.

It will be observed from 8 and 9 that the new subject will in the derived string often be transferred to a position preceding the dative NP.

There are certain other conditions the transformation is required to observe. The verb in the source string cannot take the Futur Aspectival, or a Potentive Modal. If the verb is piṭi, it cannot, in addition, take the Real Aspectival.

T 4 (Optional) Re-regularisation of Irregular Strings

$$W - \underbrace{NP_1 \hat{} \text{dat.c}}_{\text{sub}} - \underbrace{NP_2 \hat{} \text{acc.c}}_{\text{obj}} - V_{Imp} - Asp - Tense -$$

$$Z \Rightarrow$$

$$W - NP_{2\ sub} - NP_1\ \hat{}\ dat.c - V_{Imp} - Asp - Tense - Z$$

where $V_{Imp} \;/\; \left\{\begin{matrix}\underline{teri}\\ \underline{pi\dagger i}\end{matrix}\right\}$

$Z \not\in Pot$

$Asp \not\leftarrow \left\{\begin{matrix}Futur\\ Real\end{matrix}\right\}$ where $V_{Imp} \;/\; \underline{pi\dagger i}$

$Asp \not\leftarrow Futur$

T 4 has been ordered as high as it has because, as will be revealed below, the distinction between regular and irregular patterns is of relevance to the operation of various of the other rules. In subsequent discussions, the term "Irregular Impersonal Pattern" will refer to all strings which have been produced by Ts 1 and 2, but which have not passed through T 4, while the term "Irregular Pattern" will refer to strings produced by T 3. The verb in the Irregular Impersonal Pattern will be referred to as the "Irregular Impersonal Verb".

The next few rules are concerned with the embedding transformations based on the nodes Direct C introduced by PS 46, and $\underline{Cau_1}$ and $\underline{Cau_2}$, introduced by PS 47. These transformations are ordered high because they have to precede the transformation of Passivization, which, as will be demonstrated below, must be ordered before the rest of the embedding transformations. Considerations of the following kind show why this ordering is

necessary. If the main verb of a sentence like

10. saataaranaṉa vaaḻkkayin moosamaana nilaymay pissaykkaararkaḻay siirpaṭuttiamayppay maRukkas seykiRatu.
"The bad conditions of ordinary life make the beggars refuse rehabilitation." ,

which is formed by embedding

11. pissaykkaararkaḻ siirpaṭuttiamayppay maRukkiRaarkaḻ.
"The beggars refuse rehabilitation."

in Object position in

12. saataaraṉa vaaḻkkayin moosamaana nilaymay Object seykiRatu.
"The bad conditions of ordinary life make _____ ."

by the Direct Causal transformation takes the node Passive, the result will be the grammatical, if awkward, sentence

13. pissaykkaararkaḻ saataaraṉa vaaḻkkayin moosamaaṉa nilaymayaal siirpaṭuttiamayppay maRukkas seyyappaṭukiRaarkaḻ.
"The beggars are made to refuse rehabilitation by the bad conditions of ordinary life."

The change illustrated by 13 depends on the prior operation of the Direct Causal transformation which, in the process of

embedding 11 in 12, converts its subject NP into the accusative case, and transfers the Object status which 11 as a whole enjoyed previously to this NP. It is only after these changes have been accomplished that the transformation of Passivization can convert this NP into the subject of the Passive sentence, 13, produced by it.

Considerations such as this, which clearly determine the ordering of the Direct Causal and Passivization transformations relative to each other, are equally operative in determining the relative ordering of the other two Causal transformations and the Passivization transformation. They will not, however, be here elaborated on.

10, 11 and 12 illustrate many of the points regarding the Direct Causal transformation. These, and certain other points not specifically illustrated by the sentences enumerated, are as follows. An affirmative active statement sentence, whose main verb may not be an Irregular Impersonal verb, a $V_{\underline{Cop\ Iden}}$, or, under certain conditions, a $V_{\underline{Pos}}$, is embedded in Object position in another sentence whose main verb, in terms of what the lexicon indicates, must be sey "do, make", or viɬu "allow". $V_{\underline{Pos}}$ is barred from such sentences if it is realized as aaka or uɬ. The verb in the embedded sentence may take Aspectival auxiliaries, but not Modals. The verbs in both the matrix and the embedded sentences may bring their own expansions into the transform.

Thus the sentences

14. kaariyatarisi <u>ketiyaaka</u> ilikitaray kaṭitattay eḻutas seytaan.
"The Secretary quickly made the clerk write the letter." ,

into which the underlined Manner Adverbial has come from the matrix sentence

15. kaariyatarisi ketiyaaka <u>Object</u> seytaan.
"The Secretary quickly did ____." ,

and

16. kaariyatarisi ilikitaray kaṭitattay <u>ketiyaaka</u> eḻutas seytaan.
"The Secretary made the clerk write the letter quickly." ,

into which the same Adverbial has come from the embedded sentence

17. ilikitar kaṭitattay ketiyaaka eḻutinaan.
"The clerk wrote the letter quickly." ,

are both possible.

A major restriction on the transformation is that the tense markers taken by the two verbs are required to be identical. This condition ensures that a sentence like

18. vivasaakikaḻ vaara maatam kaṭanpaṭuvaarkaḻ.
"The farmers will fall into debt next month."

will be barred from embedding in a sentence like

19. paṉsam <u>Object</u> seytatu.
"The drought made ____."

and producing a non-sentence like

20. * paɲsam vivasaakikaɭay vaara maatam kaʈanpaʈas seytatu.
[[The drought made the farmers fall into debt next month]]

If the conditions set out above are satisfied, the transformation, apart from converting the subject NP of the embedded sentence into the "true" Object of the transform, will change its last verbal element, whether main verb or Aspectival, into the infinitive form.

T 5 Direct Causal

$$W - NP_{1sub} - X - \underline{NP_{2sub} \hat{} B \hat{} C \hat{} VB \quad (Asp)\ Tense_2}_{obj} -$$

$$Y - \left[\frac{sey}{viʈu}\right] - Z - Tense_1 - A \Rightarrow$$

$$W - NP_{1sub} - X - \underline{NP_2 \hat{} acc.c}_{obj} \hat{} B \hat{} C \hat{} VB \quad (Asp)\ Inf -$$

$$Y - \left[\frac{sey}{viʈu}\right] - Z - Tense_1 - A$$

where $Tense_1 = Tense_2$

$$VB \neq V_{Pos} \text{ if } V_{Pos} / \left\{\frac{aaka}{ul}\right\}$$

The transformations based on $\underline{Cau_1}$ and $\underline{Cau_2}$ (these will be termed the Indirect Causal 1 and Indirect Causal 2 transformations below) explain the derivation of sentences such as

21. raaman peṭṭiyay iRakkuvittaan.

"Rama got the box lowered."

and

22. naaṭakaasiriyar naaṭakattay piRassannappaṇṇinaan.

"The dramatist got his play put on."

respectively. The discussion on pp. 126 to 128 had demonstrated that the Indirect Causal 1 transformation is best interpreted as an embedding transformation which embeds one sentence in Object position in another, which contains a dummy verb that is erased during the embedding. The decision made during that discussion that the dummy verb is sey "do, make" is justified by the considerations that

a) this verb already/has causative associations (see T 5 above), and

b) the expansions taken by causative verbs in sentences derived by means of the transformation are best explained if the verb is sey.

The factors that support this interpretation of the Indirect Causal 1 transformation apply equally to the Indirect Causal 2 transformation, which resembles the former very closely.

Both the Indirect Causal transformations, then, embed one sentence in Object position in another whose verb is sey. In the process, they delete this verb, but retain any tense, aspectival,

voice or modal modifiers it may have taken. Between these modifiers and the verb of the embedded sentence the transformations introduce a causative affix. The affix introduced by the Indirect Causal 1 transformation is -vi-, which the morphophonemic rules will develop in different ways according to the verb preceding it, while the affix introduced by the Indirect Causal 2 transformation is pannu. This apart, the two transformations differ in that the former deletes any tense marker the verb in the embedded sentence may have carried, so that in fact it adds its affix to the root form of this verb, while the latter converts this verb into its infinitival form.

In both the transformations the tense marker carried by the verb in the embedded sentence is required to be identical with the tense marker carried by the verb in the matrix. The reasons for this are the same as those provided during the discussion above of a similar condition on the Direct Causal transformation. Indeed, most of the conditions stated for that transformation are equally applicable to the two Indirect Causal transformations, which makes it unnecessary to repeat them here. The latter, however, have to observe certain additional restrictions. First, the verb in the sentence embedded by them is prohibited from taking not only Modals but also Aspectivals after it. Second, this verb may not take the expansions Sim A_2 and Sub A_2, and certain other conjunctival expansions that are not dealt with in the present work. Thus

23. siRumi paayil viḻuntu sirittaaḷ.

"The little girl fell on the mat and laughed." ,

for example, may not be embedded in

24. koomaaḷi Object seytaan.

"The clown made ____."

by either of the Indirect Causal transformations because its verb takes a Sub A_2 expansion.

Apart from the processes already described, the two Indirect Causal transformations effect the following changes in the strings that enter them. If the verb of the embedded sentence is intransitive, they add an accusative case marker to its subject NP, and transfer the role of Object which the embedded sentence in its entirety had hitherto filled to this NP. This is illustrated in turn for the two transformations by

25. koṭiyavan piḷḷayay aḻuvittaan.

"The bully made the child cry."

and

26. koomaaḷi siRumiyay sirikkappaṇṇinaan.

The clown made the little girl laugh."

Where, on the other hand, the verb of the embedded sentence is transitive, the transformations generally delete its subject and elevate its Object NP to the status of Object in the transform.

Since in fact the sentence to which this verb belongs has been embedded in Object position in the matrix, what this amounts to is a transference of the function of Object in the transform from the entire embedded sentence, which had performed it up to now, to its Object NP. It is in fact this change that enables the Passive transformation, when it operates on a string derived by either of the Indirect Causal transformations, to treat the Object NP of the embedded sentence as the Object of the entire string. The points just discussed are illustrated by 21 and 22.

There are certain conditions under which the Indirect Causal 1 transformation effects changes different from those described above in the strings it operates on. It has been pointed out on pp. 130 to 132 that many involitive verbs are prohibited from occurring in sentences embedded by this transformation. There are certain involitive verbs, however, which may occur in such sentences, and where these are transitive (like uṇ "eat" and kaaṇ "see"), the transformation, instead of deleting the subject NP, converts it into a dative NP, as is illustrated by

27. ammaa pillaykku sooRu uṇpittaaḷ.
"The mother got the child fed rice."

This in fact is one of the major differences between the Indirect Causal 1 and Indirect Causal 2 transformations. The other points of difference between them, relating to the affixal forms

added to the verb in the embedded sentence, and to the restrictions on the verbs which may occur in sentences embedded by the Indirect Causal 1 transformation have already been dealt with (see pp. 164 to 165, and 254), and will not be repeated. With regard to the last-mentioned difference it might, however, be pointed out that the dummy node c taken by verbs in sentences embedded by the Indirect Causal 1 transformation is deleted by it.

The rules dealing with the Indirect Causal transformations have to account for a further complication, which arises when the verb in the sentence embedded by them is transitive. The exact nature of this complication can be understood if 21 is expanded to

28. raaman veeluvayk koɳṭu peṭṭiyay iRakkuvittaan.
"Rama got the box lowered by Velu." ,

and this compared with the sentence which would have been embedded by the Indirect Causal 1 transformation in deriving 21,

29. veelu peṭṭiyay iRakkinaan.
"Velu lowered the box."

The point of interest is that the NP head of the underlined agentive phrase taken as an expansion by the verb in 28 is identical with the subject NP of 29. Moreover, the immediate action denoted by the verb in both 28 and 29 is performed by the person denoted by this NP. Clearly, the grammar can meet the demands of descriptive adequacy

in the matter only if it accounts for these factors. No simple conversion of the subject NPs of transitive verbs in sentences embedded by the Indirect Causal transformations into agentive phrases will, however, be sufficient in this particular case. The argument against following such a procedure is that it would obscure the essential relationship there is between agentive phrases in sentences like 28 and agentive phrases in other environments. It would, moreover, take no account of the strong intuition there is that the agentive phrase in 28 specifically modifies the subject, Rama's, action. On both counts, the gain made in descriptive adequacy at one point in the grammar will be offset by losses at other points.

In the circumstances, the only treatment that would satisfy the demands of descriptive adequacy on all counts appears to be the following. If any sentence derived by means of an Indirect Causal transformation contains a transitive verb and an agentive phrase of the kind under discussion, this agentive phrase will be interpreted as having been brought into the sentence from the matrix sentence involved in the transformation. In this matrix sentence it would have been developed (like any other agentive phrase) as a Sub A_2 expansion taken by the dummy verb. To be more specific, the agentive phrase in 28 will be interpreted as having been brought into it from the matrix sentence involved in the Indirect Causal 1 transformation which produced it. This would account for the native user's intuition that the agentive phrase in 28 modifies the subject's

action. There still remains the further point to account for, that the NP of the agentive phrase in 28 is identical with the subject of the sentence embedded by the Indirect Causal 1 transformation in deriving it. All that is necessary in order to account for this is a condition which states that if the matrix sentence involved in an Indirect Causal transformation takes an agentive phrase, then the subject NP of the embedded sentence must, if this sentence contains a transitive verb, be identical with the NP of this phrase. This will give as the matrix sentence in which 29 is embedded to produce 28,

30. raaman veeluvayk koɳtu Object seytaan.
[[Rama, having taken Velu, did ____]]
"Rama got ____ by Velu."

This condition will ensure that when the subject NP of 29 is deleted by the Indirect Causal 1 transformation there is no accompanying loss of descriptive power.

The condition just described will not apply to the Indirect Causal 1 transformation when it converts the subject NP of the matrix sentence involved in it into a dative NP instead of deleting it. The rules below, while providing for this, will have to account for the further facts that the transformation based on the node Sub A_2 has not as yet taken place, and that in any case it produces an agentive phrase only when the sentence embedded by it has kol "take" as the main verb.

T 6 Indirect Causal 1

T 6.1 Intransitive Verbs

$$W - NP_{1sub} - X - \underline{NP_{2sub} \hat{} B \hat{} VB \hat{} c \hat{} Tense_{2}}_{obj} -$$

$$\underline{sey} - Z - Tense_1 - A \Rightarrow$$

$$W - NP_{1sub} - X - \underline{NP_2 \hat{} acc.c}_{obj} \hat{} B \hat{} VB \hat{} \underline{-vi-} -$$

$$Z - Tense_1 - A$$

where $B \notin \left\{ \begin{array}{l} \text{Object} \\ \text{Sim } A_2 \\ \text{Sub } A_2 \\ \vdots \end{array} \right\}$

$$Tense_1 = Tense_2$$

T 6.2 Transitive Verbs

T 6.21

$$W - NP_{1sub} - X - \underline{NP_{2sub} \hat{} D \hat{} NP_{3obj1} \hat{} E \hat{} VB \hat{} c \hat{}}$$

$$\underline{Tense_2}_{obj} - \underline{sey} - Z - Tense_1 - A \Rightarrow$$

$$W - NP_{1sub} - X - NP_2 \hat{} \text{dat.c} \hat{} D \hat{} NP_{3obj} \hat{} E \hat{} VB \hat{}$$

$$\underline{\text{-vi-}} - Z - \text{Tense}_1 - A$$

where $VB \quad / \quad [+V, \ldots, -v\bullet, \ldots]$

$\text{Tense}_1 = \text{Tense}_2$

$\begin{Bmatrix} D \\ E \end{Bmatrix} \not\subset \begin{Bmatrix} \text{Sim } A_2 \\ \text{Sub } A_2 \\ \vdots \end{Bmatrix}$

T 6.22

$$W - NP_{1sub} - X - (A \hat{} NP_{2\bullet bj2} \hat{} B \hat{} \underline{\text{kol}}) - Y - \underline{NP_{3sub}} \hat{}$$

$$\underline{D \hat{} NP_{4objl} \hat{} E \hat{} VB \hat{} \underline{c} \hat{} \text{Tense}_{2\bullet bj}} - \underline{\text{sey}} - Z -$$

$$\text{Tense}_1 - A \Rightarrow$$

$$W - NP_{1sub} - X - (A \hat{} NP_{2obj2} \hat{} B \hat{} \underline{\text{kol}}) - Y - D \hat{}$$

$$NP_{4obj} \hat{} E \hat{} VB \hat{} \underline{\text{-vi-}} - Z - \text{Tense}_1 - A$$

where $\text{Tense}_1 = \text{Tense}_2$

$A \ldots \underline{\text{kol}} \quad / \quad \text{Sub } A_2$

$$NP_2 = NP_3$$

$$\begin{Bmatrix} D \\ E \end{Bmatrix} \not\subset \begin{Bmatrix} \text{Sim } A_2 \\ \text{Sub } A_2 \\ \vdots \end{Bmatrix}$$

T 7 Indirect Causal 2

T 7.1 Intransitive Verbs

$$W - NP_{1sub} - X - \underline{NP_{2sub} \hat{} B \hat{} VB \hat{} Tense_2}_{obj} - \underline{sey} - Z$$

$$Tense_1 - A \Rightarrow$$

$$W - NP_{1sub} - X - \underline{NP_2 \hat{} \text{acc.c}}_{obj} \hat{} B \hat{} VB \hat{} Inf \hat{} \underline{panqu} -$$

$$Z - Tense_1 - A$$

where $$VB \not\subset \begin{Bmatrix} V_{Pos} \\ V_{Cop\ Iden} \end{Bmatrix}$$

$$B \not\subset \begin{Bmatrix} \text{Object} \\ \text{Sim } A_2 \\ \text{Sub } A_2 \\ \vdots \end{Bmatrix}$$

$$Tense_1 = Tense_2$$

T 7.2 Transitive Verbs

$$W - NP_{1sub} - X - (A \hat{} NP_{2obj2} \hat{} B \hat{} \underline{kol}) - Y - \underline{NP_{3sub} \hat{} D \hat{} NP_{4obj1} \hat{} E \hat{} VB \hat{} Tense_2}_{obj} - \underline{sey} - Z - Tense_1 - A \Rightarrow$$

$$W - NP_{1sub} - X - (A \hat{} NP_{2obj2} \hat{} B \hat{} \underline{kol}) - Y - D \hat{} NP_{4obj} \hat{}$$

$$E \hat{} VB \hat{} Inf \hat{} \underline{pannu} - Z - Tense_1 - A$$

where $$VB \neq \begin{Bmatrix} V_{Pos} \\ V_{Cop\ Iden} \end{Bmatrix}$$

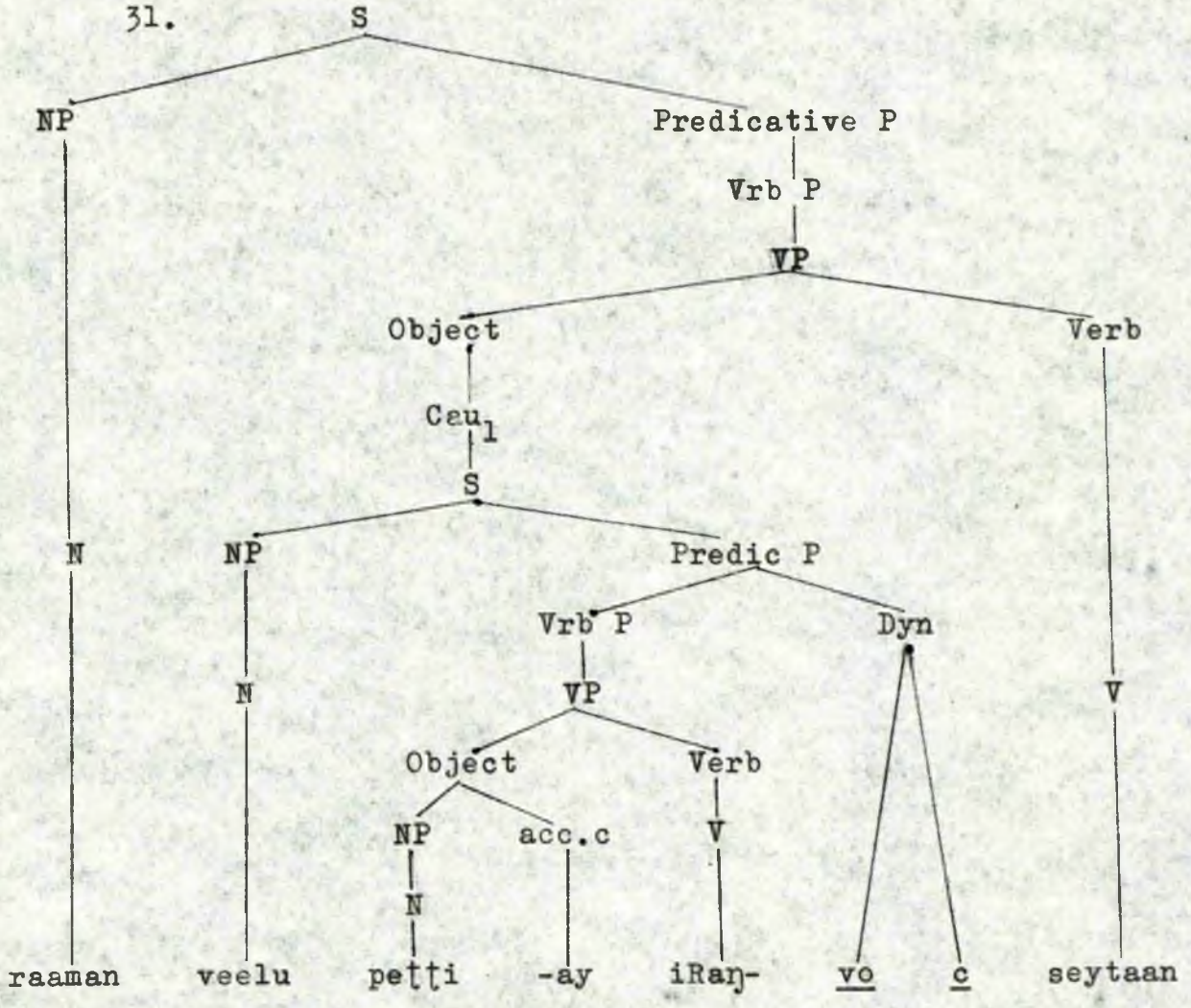
$$A....\underline{kol} \quad / \quad Sub\ A_2$$

$$NP_2 = NP_3$$

$$Tense_1 = Tense_2$$

$$\begin{Bmatrix} D \\ E \end{Bmatrix} \neq \begin{Bmatrix} Sim\ A_2 \\ Sub\ A_2 \\ \vdots \end{Bmatrix}$$

The following simplified tree of derivation for 21 will illustrate the kind of process worked out by all three Causal transformations described above.



The rule dealing with the Passive also stakes its claim for a high ordering because it wrings changes in strings which cannot conveniently be handled once these strings have been subjected to other transformational processes. Problems like the following, which arises when the Passive transformation is postponed until after the transformation which embeds a sentence as a qualifier of a noun in another sentence, validate the claim just made. The conditions on the embedding transformation under discussion are broadly that a) the

the qualified noun in the matrix sentence must be identical with a noun in the embedding sentence, and b) the latter noun must not be followed by a postfix. Thus

32. arasiyalvaati kol̪kayay te̞l̪ivaaka vi̞l̪akkinaan.
"The politician explained (his) policy clearly."

may be embedded as a qualifier of the subject noun of either of the sentences

33. kol̪kay vaakkaa̞l̪arka̞l̪ay santoo∫appa̞t̪uttiyatu.
"The policy pleased the voters."

and

34. arasiyalvaati vaakkukka̞l̪ay peRRaan.
"The politician got the votes."

to give

35. arasiyalvaati te̞l̪ivaaka vi̞l̪akkina kol̪kay vaakkaa̞l̪arka̞l̪ay santoo∫appa̞t̪uttiyatu.
"The policy which the politician explained clearly pleased the voters."

and

36. kol̪kayayt te̞l̪ivaaka vi̞l̪akkina arasiyalvaati vaakkukka̞l̪ay peRRaan.
"The politician who explained (his) policy clearly got the votes."

respectively. If the Passive transformation were to follow the rule

by means of which 35 and 36 are derived (this will be referred to as the Adjectivalization transformation in the discussion below), a problem of statement arises. The embedded sentence can undergo the Passive transformation in 35 but not in 36. That is

37. arasiyalvaatiyaal teḷivaaka viḷakkappaṭṭa koḷkay vaakkaaḷarkaḷay santooʃappaṭuttiyatu.
"The policy, which was clearly explained by the politician, pleased the voters."

is permitted, but not

38. * koḷkay teḷivaaka viḷakkappaṭṭa arasiyalvaati vaakkukkaḷay peRRaan.

Nevertheless, in both instances the embedded sentence meets the general condition on the operation of the Passive transformation, which is that its verb must take an Object NP. If, therefore, the Passive transformation operates on strings that have previously been produced by the Adjectivalization transformation, the only way in which it can satisfactorily account for the facts just described is by stating in general terms the set of environmental conditions under which sentences that meet the general condition on its operation are prohibited from subjecting themselves to it. Such a statement, however, is likely to be extremely cumbersome, if possible. This is where the advantage of an ordering which places the Passive transformation before the Adjectivalization transformation lies.

Such an ordering would in the simplest way ensure the generation of grammatical strings like 37, while blocking the generation of non-sentences like 38. To see how this will be so, consider the sentence produced by the operation of the Passive transformation on 32 above,

39. kol̤kay arasiyalvaatiyaal tel̤ivaaka vil̤akkappaṭṭatu.
"The policy was clearly explained by the politician."

When 39 reaches the Adjectivalization transformation, it will readily embed itself before the subject noun in 33 (for it meets the conditions set out above) to produce 37. On the other hand, it will not embed itself before the subject noun in 34, for what was the subject noun of the active sentence from which it has been derived is now in an agentive phrase in which it is followed by the postfix -aal. The position in this case is that although 34 and 39 meet the first of the conditions (stated above) on the Adjectivalization transformation, they do not meet the second. As a result the operation of the transformation on them is automatically blocked, and this ensures that non-sentence 38 remains ungenerated.

While evidence of this kind justifies a high ordering for the Passive transformation, there is one rule which has to precede it. This involves strings whose verbs take either the Stative auxiliary kiṭa or the Anticipative auxiliary iru. If the verbs in such strings are transitive, they are obligatorily assigned the node Passive, which means that the strings to which they belong

are subjected to the Passive transformation. Thus if the verb in

40. vellam vara mun makkal sottukkalay uyaramaana nilattukku iluttaarkal.
"Before the floods came, the people dragged (their) belongings to high ground."

takes kiṭa, the sentence will obligatorily be subjected to the Passive transformation, and the result will be

41. vellam vara mun makkalaal sottukkal uyaramaana nilattukku ilukkappaṭṭukkiṭantana.
"Before the floods came, (their) belongings had been dragged to high ground by the people."

The change described does not take place when the verb involved belongs to the sub-class V_{Imp}.

A sentence that has been passivized on account of its verb having taken the Stative auxiliary may undergo a further optional transformation, provided its subject has a Neuter or Inanimate noun or pronoun as head. This transformation, which takes place more often than less, erases the passivizing particle paṭu from the sentence on which it operates. Thus from 41 it will derive

42. vellam vara mun sottukkal uyaramaana nilattukku iluttukkiṭantana.
"Before the floods came, the belongings had been dragged to high ground."

(The absence of the agentive phrase makka]aal "by the people" in 42 is to be explained by the fact that 41 had passed through another transformation which had deleted this phrase before coming on to the transformation under discussion.) The rule which deletes the passivizing particle presupposes the passivization rule - the latter has to introduce the particle before the former can delete it-- and this fact determines the ordering of the two relative to each other.

T 8 Obligatory Passivization

$$W - Obj - X - VB - Y - \begin{bmatrix} Stat \\ Antic \end{bmatrix} - Z \Rightarrow$$

$$W - Obj - X - VB \hat{} Passive - Y - \begin{bmatrix} Stat \\ Antic \end{bmatrix} - Z$$

where $Obj \neq \begin{Bmatrix} Quot \\ S_{Inf} \end{Bmatrix}$

$V \neq V_{Imp}$

The following pairs of sentences illustrate the processes which take place when an active sentence is converted into a passive one.

43. a) 1796il pirittaaniyarka] ilaŋkayiliruntu •llaantarka]ay tuRattinaarka].

"In 1796 the British expelled the Dutch from Ceylon."

b) 1796il ollaantarkaḷ pirittaaniyarkaḷaal ilaṅkayiliruntu tuRattappaṭṭaarkaḷ.

"In 1796 the Dutch were expelled from Ceylon by the British."

44. a) viṇṇaaṇikaḷ <u>manitan 1970kku mun santiranay pooys seervaan enRu</u> sollukiRaarkaḷ.

"Scientists say that man will reach the moon before 1970."

b) manitan 1970kku mun santiranay pooys seervaan enRu viṇṇaaṇikaḷaal sollappaṭukinRatu.

"It is said by scientists that man will reach the moon before 1970."

45. a) palar <u>saraṭsantiraa ilaṅkayin mikas siRanta naaṭakaasiriyar</u> enkiRaarkaḷ.

"Many say that Sarathchandra is the most distinguished dramatist in Ceylon."

b) palaraal saraṭsantiraa ilaṅkayin mikas siRanta naaṭakaasiriyar enappaṭukiRaar.

"Sarathchandra is said by many to be the most distinguished dramatist in Ceylon."

The underlined portion in each of the active sentences above constitutes its object. The object in 43 a) is a noun in the

accusative case; in 44 a), it is a sentence embedded by the Factive Object transformation (T 38); and in 45 a), it is a quotation. As illustrated by 43 and 44, the process of passivization consists of the transference of the Object of a statement sentence to subject function, with the consequent removal, when this Object has a noun or pronoun head, of its accusative case marker, the conversion of the previous subject into an agentive phrase (marked by the addition of the agentive suffix -aal to it) and the addition of a passivizing particle paṭu to the verb. Where the active string has been produced by any one of the Causative transformations (Ts 5, 6 and 7), certain additional factors must be noted. The Object that will be transferred to subject function will not be the sentence embedded by those transformations in Object position but the NP in this sentence which had been elevated to Object status in the transforms by them.

Where the Object of the string undergoing the Passive transformation is Quotat, yet other factors must be noted. Where, as in 45 a), the Quotat is a sentence built on the sub-pattern, NP_{sub} ^ Comp ^ $V_{Cop\ Iden}$, the transformation converts not the entire Quotat Object but only the subject NP of the copulative sentence it is realized as into the subject of the transform. This is borne out by the fact that in 45 b) the passive verb is in number, gender and person concord with this NP. Where, however, Quotat is not realized as a copulative sentence of the kind speci-

fied, the transformation converts it in its entirety into the subject of the transform, and as a result of this change, the later Concord rule (T 71) will assign the verb in the passive sentence derived the Third Person Singular Neuter inflection.. Such differences apart, the transformation carries out the changes described above in the case of these strings too, with the one further exception that it will obligatorily delete $V_{\underline{Cop\ Iden}}$. A separate rule will be required to accomodate the peculiarities of Quotative sentence Objects relative to the transformation.

T 9 Passivization

T 9.1 Copulative Quotative Sentences

$$W - NP_{1sub} - NP_{2sub1} \hat{} Comp \hat{} V_{Cop\ Iden} - X - VB - Passive - Y \Rightarrow$$

$$W - NP_1 \hat{} \underline{-aal} - NP_{2sub} \hat{} Comp - X - VB \hat{} \underline{patu} - Y$$

where $NP_2 \ldots V_{Cop\ Iden} \leftarrow$ Quotat

T 9.2 General

$$W - NP_{1sub} - \begin{bmatrix} NP_2 \hat{} acc.c \\ Fact\ Obj \\ Quotat \end{bmatrix} - X - VB\ (Cau) - Passive - Y \Rightarrow$$

$$W - NP_1 \text{ ^ } \underline{\text{-aal}} - \begin{bmatrix} NP_2 \\ \text{Fact Obj} \\ \text{Quotat} \end{bmatrix}_{sub} - VB\ (Cau)\ \underline{paṭu} - Y$$

where $W \not\in Imp$

$Cau \not\in \{\underline{\text{-vi-}}, \underline{\text{-paṇṇu-}}\}$

Strings produced by T 9 may be subjected to a further optional rule, which deletes the agentive phrase in them. This rule accounts for the alternative form which 43 b), for example, has,

46. 1796il ollaantarkaḷ ilaṅkayiliruntu tuRattappaṭṭaarkaḷ.
"In 1796 the Dutch were expelled from Ceylon."

T 10 (Optional) Deletion of Agentive Phrase

$$X - NP \text{ ^ } \underline{\text{-aal}} - Y - VB\ (Cau)\ \underline{paṭu} - Z \Rightarrow$$

$$X - Y - VB\ (Cau)\ \underline{paṭu} - Z$$

where $X...Z \Leftarrow$ T 9

It has already been stated that the Concord rule will assign the Third Person Neuter Singular inflections to the verbs of passivized sentences whose subjects have been derived from

Quotats which are not realized as copulative sentences containing $V_{Cop\ Iden}$. There is one other context too in which the Concord rule will assign these inflections to the verbs of passivized sentences, and this is where the subjects of these verbs have been derived from Factive Object. In all other contexts, the Concord rule will assign inflections to the verbs of passivized sentences which put them in number, gender and person concord with their new subjects.

The passivization of Quotative sentences calls for a further comment. It often happens that passivized Quotative sentences are stylistically awkward, and generally, in practice, other forms expressing the meaning intended are preferred. To recognize the preference is not, however, to deny grammaticality to such sentences. There is one instance, moreover, when the passivized Quotative sentence is intuitively the right choice. This is when the statement it contains asserts a self-evident or generally accepted truth of a universal variety, as, for example, in

47. inta karuvi kattirikkool enappaṭum.
"This instrument is known as a pair of scissors."

There is one last point to be made about the Passive transformation, and this relates to the placement of the passivizing particle within a verbal complex consisting of the main verb and one or more Aspectivals. In any such complex, the passivizing

particle invariably precedes a Real, Stat, Antic, Perf or Futur Aspectival, coming between the main verb and the Aspectival concerned. This is illustrated by

48. maaɳavaraal pala uyartara puttakaŋkaḷ vaasikkappaṭṭirukkinRana.

"Many advanced books have been read by the student." ,

where the verb takes a Perf Aspectival. T 9 already provides for this syntactic ordering, and, therefore, no special rule is necessary to account for it. The situation regarding Reten, Complet, Conclu and Progres, on the other hand,is different, for the first two of these invariably precede the passivizing particle, while the last two may either precede,or be preceded by, it. The next rule will make the necessary permutations.

T 11 Placement of Passivizing Particle

T 11.1

$$X - \underline{paṭu} - \begin{bmatrix} \text{Reten} \\ \text{Complet} \end{bmatrix} - Z \Rightarrow$$

$$X - \begin{bmatrix} \text{Reten} \\ \text{Complet} \end{bmatrix} - \underline{paṭu} - Z$$

where $X...Z \Leftarrow \begin{Bmatrix} T\ 9 \\ T\ 10 \end{Bmatrix}$

T 11.2 (Optional)

$$X - \underline{paṭu} - \begin{bmatrix} \text{Conclu} \\ \text{Progres} \end{bmatrix} - Z \Rightarrow$$

$$X - \begin{bmatrix} \text{Conclu} \\ \text{Progres} \end{bmatrix} - \underline{paṭu} - Z$$

where $X \ldots Z \Leftarrow \begin{Bmatrix} T\ 9 \\ T\ 10 \end{Bmatrix}$

Since T 11.2 is optional, the two alternatives referred to above are both provided for. T 11.1 will account for the syntactic ordering of the verbal elements in sentences like

49. viruntaaḷi varum mun aavalaana piḷḷayaal uṇavellaam viḻuṇkikoḷḷappaṭṭatu.
"Before the guest arrived, all the food had been swallowed up by the greedy child." ,

where the verb takes the Reten Aspectival, while T 11.2, if chosen, will account for the syntactic ordering of the verbal elements in sentences like the somewhat awkward

50. payttiyakkaaranaal iraṇṭu aaṭkaḷ konRuviṭappaṭṭaarkaḷ.
"Two people were killed by the madman." ,

where the verb takes the Conclu Aspectival.

When a sentence which contains a verbal complex consisting of the main verb followed by two or more Aspectivals is passivized, T 11, in conjunction with PSS 49 to 52, will determine the precise ordering of the various elements relative to each other. It might be pointed out, however, that very often the combination of the passivizing particle with any one or more Aspectivals is stylistically awkward, and generally avoided.

The next rule accounts for the changes illustrated by 41 and 42, and discussed on pp. 268 and 269.

T 12 (Optional) Erasure of Passivizing Particle

$$W - Noun_{sub} - X - \underline{patu} - Y - Stat - Z \Rightarrow$$

$$W - Noun_{sub} - X - Y - Stat - Z$$

where $W \ldots Z \Leftarrow \left\{\begin{matrix} T\ 9 \\ T\ 10 \end{matrix}\right\}$

$$Noun \ / \ (A) \left[\left\{\begin{matrix} +\ N \\ +\ Pron \end{matrix}\right\}, \left\{\begin{matrix} -\ Anim \\ +\ Neut \end{matrix}\right\}, \ldots \right] (B)$$

The next section will be devoted to those transformations which embed sentences in adverbial, nominal and adjectival positions. Interspersed among them in positions that they are called for will,

however, be certain non-embedding transformations. The comments made on ordering at the commencement of the present chapter are most relevant to the rules presented in this section. Nevertheless, certain reasons, however slight, do exist for presenting at least some of the Adverbializations before the Nominalizations.

Certain of the Adverbializations appear to demand treatment before the General Nominalization transformation because they involve, among other things, what appears to be the general nominalization of the sentence embedded in each case. In

51. kantan kumpiṭuvataRku mun neRRiyil vipuuti poosinaan.
"Before Kandan worshipped, he applied holy ash on his forehead." ,

for example, the sentence embedded before the Pre Act postfix, mun, is nominalized. Since the process of nominalization here is identical with that carried out by the General Nominalization transformation (which, as so far conceived, operates only on strings derived from the base element Gen Nom), the most economical treatment of it is by means of a single rule which accounts for it in all instances in which it is carried out. The most convenient way in which this particular economy can be gained is by setting out the Adverbialization rules first. These will indicate the processes that S embedded in certain adverbial positions will have to undergo, either as alternatives, or in addition, to its general

nominalization. Certain of the strings produced by these transformations will be fed into the General Nominalization transformation, which will be placed low enough to collect all of them and to operate on them simultaneously. The point just made does not justify the treatment of all the Adverbializations before the Nominalizations. However, since no motivation appears to exist for treating any particular Adverbialization after any particular Nominalization, the Adverbializations will be dealt with as a single group before the Nominalizations.

Within this group no particular ordering is called for, and whatever decisions are taken with regard to the matter will, unless specified as being to the contrary, be arbitrary. Before proceeding to details about the rules, one comment relating to the ordering of the elements in sentences undergoing the Adverbialization transformations must be made. Although the order specified in the base rules is generally the preferred order, it would in certain strings where Adverbializations are involved be considered highly inelegant. In such instances, the embedded sentence is generally transferred, together with any affixes it may have been assigned in the base rules, to initial position in the string. The first rule below will attend to this.

T 13 (Optional) Transference of Adverbial Nodes

W - AD - X $\Rightarrow$

AD - W - X

where AD / $\left\{\begin{matrix}\text{Perspec}\\ \text{Reason}\\ \text{Condi}\\ \text{Man Comp}\end{matrix}\right\}$

This somewhat less important general rule having been provided, the Adverbializations may be considered in detail. The Time Adverbials, which form one of the largest sub-groups among the Adverbializations, will be taken up first. These transformations are based on the Phrase Structure nodes Pre Act, Sim Act, Sub Act, Neut Act, T_{Com} and T_{Con}. The transformation based on the first of these nodes embeds a sentence like

52. santay muṭintatu.
"The fair was over."

in T position in a sentence like

53. T iḷaṭsumi tanatu marakkaRikaḷ ellaam viRRaaḷ.
"Lakshmi sold all her vegetables."

to produce a sentence like

54. santay muṭiyum mun iḷaṭsumi tanatu marakkaRikaḷ ellaam viRRaaḷ.
"Before the fair was over, Lakshmi had sold all her vegetables."

The conditions on the operation of this transformation are as follows. The verbs in the embedded and matrix sentences are required to inflect for the same tense. The verb in the embedded sentence, which must be a statement sentence, may not be either of the V_{Pos} verbs, aaka or ul, an Irregular Impersonal verb, or $V_{Cop\ Iden}$, nor may it take Neg or a Modal as an expansion. The rule accounting for these facts will also make provision for the indication of the fact that 54 could alternatively have either of the forms,

55. santay muṯintataRku mun iḷaṯsumi tanatu marakkaRikaḷ ellaam viRRaaḷ.

and

56. santay muṯiya mun iḷaṯsumi tanatu marakkaRikaḷ ellaam viRRaaḷ.

In 55, the embedded sentence has been nominalized. Details of this process will be left to the General Nominalization transformation (T 37) to attend to. After nominalization the sentence is assigned a dative case inflection, a detail which will be looked after by the Case Assignment rule (T 62). In 56, the last verbal element in the embedded sentence has been converted into its infitival form. In this case the last verbal element happens to be the main verb of the embedded sentence, but the same change would have taken place even if it had been an auxiliary. Traditionally,

the usage illustrated by 56 is characterized as ungrammatical, but it in fact has wide currency in both speech and writing in Tamil. If in the transformation under discussion the processes that are illustrated by 54 and 56 take place, the tense marker of the verb in the embedded sentence is deleted. The rule accounting for the above-mentioned facts is

T 14 (Optional) Time: Previous Action

$$A \hat{} NP_{1sub1} \hat{} B \hat{} VB_1 \text{ (Asp) } Tense_1 \hat{} \underline{mun} - W - NP_{2sub2} - X - VB_2 - Y - Tense_2 - Z \Rightarrow$$

$$A \hat{} NP_{1sub1} \hat{} B \hat{} VB_1 \text{ (Asp) } \left\{\frac{\text{-um}}{\text{Inf}}\right\} \underline{mun} - W - NP_{2sub2} - X - VB_2 - Y - Tense_2 - Z$$

where $A \ldots Tense_1 \neq$ Irregular Impersonal Pattern

$$VB_1 \neq \begin{cases} V_{Cop\ Iden} \\ V_{Pos} \text{ where } V_{Pos} / \left\{\frac{\text{aaka}}{\text{ul}}\right\} \end{cases}$$

$$A \neq \left\{\begin{matrix}\text{Imp} \\ \text{Q}\end{matrix}\right\}$$

$$Tense_1 = Tense_2$$

If a string which qualifies for entry into T 14 chooses not to undergo the processes formalized by the rule, it will be obligatorily sent on to the General Nominalization transformation.

The transformation of Simultaneous Action calls for two rules. Before enumerating the details that these rules will account for, however, it must be observed that there are two common ways of signifying simultaneous action that they will not deal with. One of these is illustrated by

57. piḷḷay ooṭaykka viḻuntaan.

"The child fell while running." ,

the other by

58. piḷḷay ooṭukiRa poḻutu viḻuntaan.

[[The child fell at the time he was running]].

The former is excluded because it is a purely colloquial usage which does not come within the purview of the present work. No difficulty would, however, be engendered if a statement to accomodate it were to become necessary. As for the latter, words such as poḻutu, which 58 uses, are treated as Time nouns in the base, and this has certain implications for them. The implication relevant here is that the Time nouns may, like all other nouns, be qualified by sentences embedded before them, an operation that is accomplished by the Adjectivalization transformations. One set

of abstract strings produced by the Adjectivalization transformations are just those of the kind illustrated by 58, hence there is no necessity to generate such strings by means of a separate Adverbialization transformation.

The first of the rules below, which is based on the PS node Sim A_1 , accounts for the derivation of

59. paampaaṭṭi pullaaŋkuḻalay vaasikka paampu uusalaaṭinatu.
"While the snake-charmer was playing his flute, the snake swayed." ,

for example, by embedding

60. paampaaṭṭi pullaaŋkuḻalay vaasittaan.
"The snake-charmer played his flute."

in T position in

61. T paampu uusalaaṭinatu.
"The snake swayed ."

The conditions on the transformation are identical with those stated for T 14 above, with two additions. Firstly, the subject NPs of the embedded and matrix sentences cannot be identical. Secondly, the embedded sentence may contain a Time expansion only if the matrix sentence does, and then too, the two expansions are required to be identical. These expansions cannot themselves be nodes developed from Sim Act. The transformation deletes any Time expansion taken

by the embedded sentence. It also erases the tense markers of the last verbal element in the embedded sentence and converts it into the infinitive.

T 15 Time: Simultaneous Action 1

$$(A)\ NP_{1subl} \hat{}\ B \hat{}\ VB_1\ (Asp)\ Tense_1 - (W) - NP_{2sub2} -$$

$$X - VB_2 - Y - Tense_2 - Z \Rightarrow$$

$$NP_{1subl} \hat{}\ B \hat{}\ VB_1\ (Asp)\ Inf - (W) - NP_{2sub2} - X -$$

$$VB_2 - Y - Tense_2 - Z$$

where $(A)...Tense_1$ / Sim A_1 ≠ Irregular Impersonal Pattern

$$VB_1 \neq \left\{ \begin{array}{l} V_{Cop\ Iden} \\ V_{Pos}\ \text{where} \\ \qquad V_{Pos} \neq \left\{ \begin{array}{l} \underline{aaka} \\ \underline{ul} \end{array} \right\} \end{array} \right\}$$

$$Tense_1 = Tense_2$$

$$A = W \ / \ Time \neq Sim\ Act$$

$$NP_1 \neq NP_2$$

The second rule relating to Simultaneous Action is based on the PS node Sim A_2 , and accounts for the derivation of

62. paaṭikkoṇṭu miinpiṭippavarkaḷ vayalay iḷuttaarkaḷ.
"Singing, the fishermen drew in the net." ,

for example, by embedding

63. miinpiṭippavarkaḷ paaṭikkoṇṭaarkaḷ.
"The fishermen sang."

in T position in

64. T miinpiṭippavarkaḷ vayalay iḷuttaarkaḷ.
"The fishermen drew in the net."

The differences from T 15 are immediately apparent. Firstly, in this transformation the subject NPs of the two sentences involved are required to be identical. The transformation deletes the subject NP of the embedded sentence. Secondly, the last verbal element in the verbal complex[4] in the embedded sentence is converted by the transformation into its Past participial form. There are certain other points about the transformation which 62 does not indicate. One is that if the verb in the embedded sentence takes an auxiliary, it must be the Reten Aspectival, koḷ. Although, moreover, the choice

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4. Here, as elsewhere, the term "verbal complex" refers to a group of elements consisting of the main verb of a sentence and the auxiliaries it takes after it. The term "verbal element" refers to either the main verb or any one of the auxiliaries. The last verbal element in the complex carries the inflections of Tense, number,

of this Aspectival is optional, it is almost invariably selected, for its non-choice will render the sentence three ways ambiguous. (It must, of course, be remembered that verbs like the Quotative verb cannot, as indicated in the lexicon, take this Aspectival under any conditions.) The other two readings 62 could have if the embedded sentence did not select Reten are

65. "Having sung, the fishermen drew in the net." ,

which is in fact attended to by the second transformation of Subsequent Action (T 18), and

66. "The fishermen sang and drew in the net." ,

a reading which need carry no implication of the relationship of the two actions involved with regard to the time perspective. Strings which have this kind of reading will be attended to by a conjunctival transformation. (This transformation is not provided in the present work.) Further differentiating T 16 from T 15 is the fact that the verb in the sentence embedded by it may take Neg as a modifier. The differences discussed above apart, the conditions stated for T 15 apply to T 16 too. The conversion of the tense marker of the verb in the embedded sentence to Past before the participle will be attended to by a later Tense Adjustment rule.

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4. (cont.) person, gender and so on which are relevant primarily to the main verb. Throughout the present work, these inflections are referred to as the inflections of the (main) verb, whether they are attached directly to it or to the last verbal element in the complex. Within the complex, there are certain automatic formal relations among the elements that do not affect its interpretation.

T 16 Time: Simultaneous Action 2

$$(A)\ NP_{1sub1} \hat{}\ B \hat{}\ VB_1\ (Reten)\ Tense_1\ (Neg)\ -\ (W)\ -$$

$$NP_{2sub2} - X - VB_2 - Y - Tense_2 - Z \Rightarrow$$

$$B \hat{}\ VB_1\ (Reten)\ Tense_1 \hat{}\ Part.\ (Neg)\ -\ (W)\ -\ NP_{2sub2}\ -$$

$$X - VB_2 - Y - Tense_2 - Z$$

where $(A)\ldots(Neg)$ / Sim A_2 ≠ Irregular Impersonal Pattern

$$VB_1 \neq \begin{cases} V_{Cop\ Iden} \\ V_{Pos} \quad \text{where } V_{Pos} / \left\{\underline{aaka}\right\} \end{cases}$$

$$Tense_1 = Tense_2$$

$$A = W \ / \ Time \neq Sim\ Act$$

$$NP_1 = NP_2$$

Three rules are required to deal with the processes carried out by the transformation of Subsequent Action. The processes formalized by the first two of these rules, which are based on the PS node Sub A_1 , are illustrated by

67. kuuṭṭam muṭinta piRaku makkaḷ kalayntaarkaḷ.

"After the meeting was over, the people dispersed."

and

68. murukan siRayiliruntu veḷiyiṭṭavuṭanee maRupaṭi tiruṭat toṭaṇkinaan.

"As soon as he got out of prison, Murukan began to steal again."

As illustrated by 67 and 68, the transformation embeds one sentence in Sub A_1 position in another. For example, 67 was derived by embedding

69. kuuṭṭam muṭintatu.

"The meeting was over."

in T position in

70. T makkaḷ kalayntaarkaḷ.

"The people dispersed."

by means of the first of the rules given below. The transformation which accounts for 67 and 68 converts the last verbal element in the embedded sentence into its Past Conjunctival participial form. In both cases, the main verb in the embedded sentence cannot be an Irregular Impersonal verb, either of the V_{Pos} verbs, aaka or uḷ, or $V_{Cop\ Iden}$, nor can it take Neg or a Modal as modifier. Moreover, its tense is required to be identical with or "prior in time to" the tense of the verb in the matrix, the order of this priority

being Past, Present and Future. The embedded sentence cannot be imperative.

While 67 and 68 share all these features in common, the two have to be distinguished because the former has an alternative form corresponding with it,

71. kuuṭṭam muṭintataRku piRaku makkaḷ kalayntaarkaḷ. ,

which the latter does not have. That is, where piRaku (or its alternative form, pin) is chosen, the sentence embedded before it may be nominalized by the General Nominalization transformation (T 37) instead of being subjected to the processes illustrated by 67. The Case Assignment rule (T 62) will subsequently assign the nominalized sentence a dative case marker. The difference in the choices discussed is not paralleled by a difference in the meaning of the sentences produced. Again, a later Tense Adjustment rule (T 97) will be entrusted with the adjustment of the tense of the verbal element before the time particle.

T 17 Time: Subsequent Action 1

T 17.1 (Optional)

$$A \hat{} NP_{1sub1} \hat{} B \hat{} VB_1 \text{ (Asp) } Tense_1 \begin{bmatrix} pin \\ piRaku \end{bmatrix} - W -$$

$$NP_{2sub2} - X - VB_2 - Y - Tense_2 - Z \Rightarrow$$

$$A \hat{} NP_{1subl} \hat{} B \hat{} VB_1 \text{ (Asp) } Tense_1 \hat{} \text{Conj. Part.}$$

$$\begin{bmatrix} \underline{pin} \\ \underline{piRaku} \end{bmatrix} - W - NP_{2sub2} - X - VB_2 - Y - Tense_2 - Z$$

where A...$Tense_1 \neq$ Irregular Impersonal Pattern

$$VB_1 \neq \left\{ \begin{matrix} V_{Cop\ Iden} \\ V_{Pos} \text{ where } V_{Pos} / \left\{ \begin{matrix} \underline{aaka} \\ \underline{ul} \end{matrix} \right\} \end{matrix} \right\}$$

$$Tense_1 / \left\{ \begin{matrix} \text{Past where } Tense_2 / \text{Past} \\ \left\{ \begin{matrix} \text{Past} \\ \text{Pres} \end{matrix} \right\} \text{ where } Tense_2 / \text{Pres} \\ \left\{ \begin{matrix} \text{Past} \\ \text{Pres} \\ \text{Fut} \end{matrix} \right\} \end{matrix} \right\}$$

$$A \not\in \left\{ \begin{matrix} \text{Imp} \\ Q \end{matrix} \right\}$$

T 17.2

$$A \hat{} NP_{1subl} \hat{} B \hat{} VB_1 \text{ (Asp) } Tense_1 \hat{} \underline{u\underline{t}anee} - W - NP_{2sub2} -$$

$$X - VB_2 - Y - Tense_2 - Z \Rightarrow$$

$$A \hat{} NP_{1subl} \hat{} B \hat{} VB_1 \text{ (Asp) } Tense_1 \hat{} \text{Conj. Part.} \hat{}$$

$$\underline{u\underline{t}anee} - W - NP_{2sub2} - X - VB_2 - Y - Tense_2 -$$

where A...Tense$_1$ $\neq$ Irregular Impersonal Pattern

$$VB_1 \neq \begin{cases} V_{Cop\ Iden} \\ V_{Pos} \quad \text{where} \quad V_{Pos} \ / \ \left\{\begin{matrix}\underline{aaka} \\ \underline{ul}\end{matrix}\right\} \end{cases}$$

$$\text{Tense}_1 \ / \ \begin{cases} \text{Past} \quad \text{where} \quad \text{Tense}_2 \ / \ \text{Past} \\ \left\{\begin{matrix}\text{Past} \\ \text{Pres}\end{matrix}\right\} \quad \text{where} \quad \text{Tense}_2 \ / \ \text{Pres} \\ \left\{\begin{matrix}\text{Past} \\ \text{Pres} \\ \text{Fut}\end{matrix}\right\} \end{cases}$$

$$A \neq \left\{\begin{matrix}\text{Imp} \\ \text{Q}\end{matrix}\right\}$$

If a string which qualifies for entry into T 17.1 chooses not to undergo the transformation, it will be obligatorily sent on to the General Nominalization transformation.

The processes accounted for by the third Subsequent Action transformation are illustrated by

72. iḷaṭsumi sampalay sarikkattivittu appaṇ suṭat toṭaṇkinaaḷ.
"Having made the sambol, Lakshmi began to bake hoppers."

which is formed by embedding

73. iḷaṭsumi sampalay sarikkattivittaaḷ.
"Lakshmi made the sambol."

in T position in

74. T iḷaṭsumi appaṇ suṭat toṭaṇkinaaḷ."
"Lakshmi began to bake hoppers."

These processes are different from those accounted for by T 17 in two ways. Firstly, the subject NP of the embedded sentence is required to be identical with the subject NP of the matrix, which alone of the two is retained in the transform. Secondly, the last verbal element of the embedded sentence is converted into its Past participial form. The rules below will introduce only the participle, leaving it to a later Tense Adjustment rule (T 97) to adjust the tense. Generally, the verb in the embedded sentence takes only one auxiliary, the Conclu Aspectival, viiu. Although its choice is optional, it is very often selected for if it is not, the resulting transform will be three ways ambiguous. (For details regarding this, see the discussion above of 62, 65 and 66.) Although, too, the Conclu Aspectival may be preceded by other Aspectivals (details about these are provided by PSS 50 to 52), only one of these, Complet, may occur without the Conclu Aspectival following it. The verb in the embedded sentence may take Neg, but not a Modal, after it. It may not be an Irregular Impersonal verb, $V_{Cop\ Iden}$, or either of the V_{Pos} verbs, aaka or ul. Its tense must be identical with or "prior in time to" the tense of the verb in the matrix.

T 18 Time: Subsequent Action 2

$$A \hat{} NP_{1subl} \hat{} B \hat{} VB_1 \text{ (Asp) } Tense_1 \text{ (Neg) } - W - NP_{2sub2} -$$

$$X - VB_2 - Y - Tense_2 - Z \Rightarrow$$

$$A \hat{} B \hat{} VB_1 \text{ (Asp) } Tense_1 \hat{} Part. \text{ (Neg) } - W - NP_{2sub2} -$$

$$X - VB_2 - Y - Tense_2 - Z$$

where A...(Neg) / Sub A_2 ≠ Irregular Impersonal Pattern

$$VB_1 \neq \begin{cases} V_{Cop\ Iden} \\ V_{Pos} \text{ where } V_{Pos} / \begin{Bmatrix} \underline{aaka} \\ \underline{ul} \end{Bmatrix} \end{cases}$$

$$Asp / \begin{Bmatrix} Complet \\ (Aux)\ Conclu \end{Bmatrix}$$

$$NP_1 = NP_2$$

$$Tense_1 / \begin{cases} Past \text{ where } Tense_2 / Past \\ \begin{Bmatrix} Past \\ Pres \end{Bmatrix} \text{ where } Tense_2 / Pres \\ \begin{Bmatrix} Past \\ Pres \\ Fut \end{Bmatrix} \end{cases}$$

$$A \not\in \begin{Bmatrix} Imp \\ Q \end{Bmatrix}$$

The term Aux in the structural conditions on the rule is to be interpreted as referring to those auxiliaries that in terms of the PS rules may precede Conclu.

The transformation of Neutral Action, which is also an embedding transformation, is so named because the actions represented by the verbs in the embedded and matrix sentences are not

specifically "placed" in terms of the time perspective relative to each other. In certain instances, extra-linguistic factors do indicate such a placing, as for example in

75. veelay muṭintatooṭu kaṇavan viiṭṭukku tirumpinaan.
[[With the work finishing, the husband returned home]] ,

where the implications of the verb muṭi "finish" suggest that the most appropriate reading for the sentence is

76. "After the work was over, the husband returned home."

Often, however, such is not the case, as

77. iḷaṭsumi jannalay tupparavaakinatooṭu tiraykaḷay maaRRinaaḷ.
[[With her cleaning the window, Lakshmi changed the curtains]] ,

where no extra-linguistic factors contribute to dispel the neutrality regarding the time perspective of the actions involved, demonstrates. 77 is derived by embedding

78. iḷaṭsumi jannalay tupparavaakkinaaḷ.
"Lakshmi cleaned the window."

in T position in

79. T iḷaṭsumi tiraykaḷay maaRRinaaḷ.
"Lakshmi changed the curtains."

The main conditions on the transformation are as follows. The tense markers of the verbs in the two sentences involved, and any Time expansions they may take (if one takes a Time expansion, the other must too) are required to be identical. The Time expansion can be any node developed from Time in the PS rules but Neut Act. The verb in the embedded sentence, which cannot be imperative or interrogative, is prohibited from being an Irregular Impersonal verb, either of the V_{Pos} verbs, aaka or ul , or $V_{Cop\ Iden}$. Moreover, it may not take Neg or a Modal as a modifier. The transformation erases the Time node (if it takes one) of the embedded sentence, and nominalizes it. Again, the process of nominalization will be accomplished later by the General Nominalization transformation (T 37).

T 19 Time: Neutral Action

$$(A)\ NP_{1subl} \hat{}\ B \hat{}\ VB_1\ (Asp)\ Tense_1 \begin{bmatrix} -ootu \\ -utan \\ -um \end{bmatrix} - (W)$$

$$NP_{2sub2} - X - VB_2 - Y - Tense_2 - Z \Rightarrow$$

$$NP_{1subl} \hat{}\ B \hat{}\ VB_1\ (Asp)\ Tense_1 \begin{bmatrix} -ootu \\ -utan \\ -um \end{bmatrix} - (W)$$

$$NP_{2sub2} - X - VB_2 - Y - Tense_2 - Z$$

where $A...Tense_1 \neq$ Irregular Impersonal Pattern

$$VB_1 \neq \left\{ \begin{array}{l} V_{Cop\ Iden} \\ V_{Pos} \quad \text{where} \quad V_{Pos} \ / \ \left\{ \begin{array}{l} \underline{aaka} \\ \underline{ul} \end{array} \right\} \end{array} \right\}$$

$$Tense_1 = Tense_2$$

$$A = W \ / \ Time \neq Neut\ Act$$

The next Time transformation is based on the node $\underline{T_c}$, and accounts for the derivation of sentences such as

80. raaman <u>1952il iruntu</u> yaalppaaNattil vaalntuvarukiRaan.
"Rama has lived in Jaffna since 1952."

The underlined $\underline{T_c}$ phrase contains the Past Participle form of the $\underline{V_{Pos}}$ verb, <u>iru</u>, and it would satisfy the demands of descriptive adequacy best if the phrase is derived from a sentence which contains that verb. It must be pointed out, however, that at times this sentence will appear somewhat artificial. In terms of the interpretation just suggested, 80 will be derived by embedding

81. raaman 1952il yaalppaaNattil iruntaan.
"Rama was in Jaffna in 1952."

in <u>T</u> position in

82. raaman <u>T</u> yaalppaaNattil vaalntuvarukiRaan.
"Rama is living in Jaffna."

The conditions on the transformation are as follows. The main verb of the embedded sentence must be the V_{Pos} , iru. The subject NP of this verb must be identical with the subject NP of the matrix sentence. It must, moreover, take a Time Partic expansion, which, in 81, is 1952il "in 1952". It may take a Loc expansion only if the verb in the matrix does so, and then, too, the two are required to be identical. The embedded sentence must be an affirmative statement. The transformation deletes the subject NP and any Loc expansion taken by the verb in the embedded sentence and converts its verb into its Past participial form. The rule below will introduce the participle, but leave it to a later rule (T 97) to adjust the tense.

T 20 Time: Commencement

$$W - NP_{1subl} - X - NP_{2sub2} \hat{} \text{Partic } (Loc_1)\ V_{Pos} \hat{} \text{Tense} -$$

$$(Loc_2) - Z \Rightarrow$$

$$W - NP_{1subl} - X - \text{Partic} \hat{} V_{Pos} \hat{} \text{Tense} \hat{} \text{Part.} -$$

$$(Loc_2) - Z$$

where $NP_2 \ldots \text{Tense} \ / \ T_c$

$NP_1 = NP_2$

$Loc_1 = Loc_2$

$V_{Pos} \ / \ \underline{iru}$

The last of the Time transformations, which is based on the PS node, T_{Con} (PS 17), embeds a sentence like

83. vivasaayikaḷ taṉkaḷuṭaya vivasaaya muRaykaḷay naviinappaṭuttuvaarkaḷ.
"The farmers will modernize their methods of agriculture."

in T position in a sentence like

84. T varay vayalkaḷin viḷayvu kuRayvaaka irukkum.
"The yields from the fields will be low until ____."

to give a sentence like

85. vivasaayikaḷ taṉkaḷuṭaya vivasaaya muRaykaḷay naviinappaṭuttum varay vayalkaḷin viḷayvu kuRayvaaka irukkum.
"The yields from the fields will remain low until the farmers modernize their methods of agriculture."

The following are the conditions on the transformation. The verb in the embedded sentence may not be an Irregular Impersonal verb, either of the V_{Pos} verbs, aaka or uḷ, or $V_{Cop\ Iden}$. It may not, further, take Neg or a Modal as modifier. Its tense must be the same as the tense of the verb in the matrix. It may take a Time expansion only if the verb in the matrix does so, and then too, the two expansions are required to be identical. These expansions may not themselves be realized as T_{Con}. The transformation will

delete the Time node and the tense marker of the verb in the embedded sentence, add the suffix -um to it, and transfer the Time node of the matrix sentence to initial position in the transform.

T 21 Time: Conclusion

$$(A)\ B \hat{}\ VB_1\ (Asp)\ Tense_1 \hat{}\ \underline{varay}\ -\ (W)\ -\ X\ -\ VB_2\ -$$

$$Y\ -\ Tense_2\ -\ Z \Rightarrow$$

$$(W)\ -\ B \hat{}\ VB_1\ (Asp)\ \underline{-um} \hat{}\ \underline{varay}\ -\ X\ -\ VB_2\ -\ Y\ -$$

$$Tense_2\ -\ Z$$

where $A \ldots Tense_1 \neq$ Irregular Impersonal Pattern

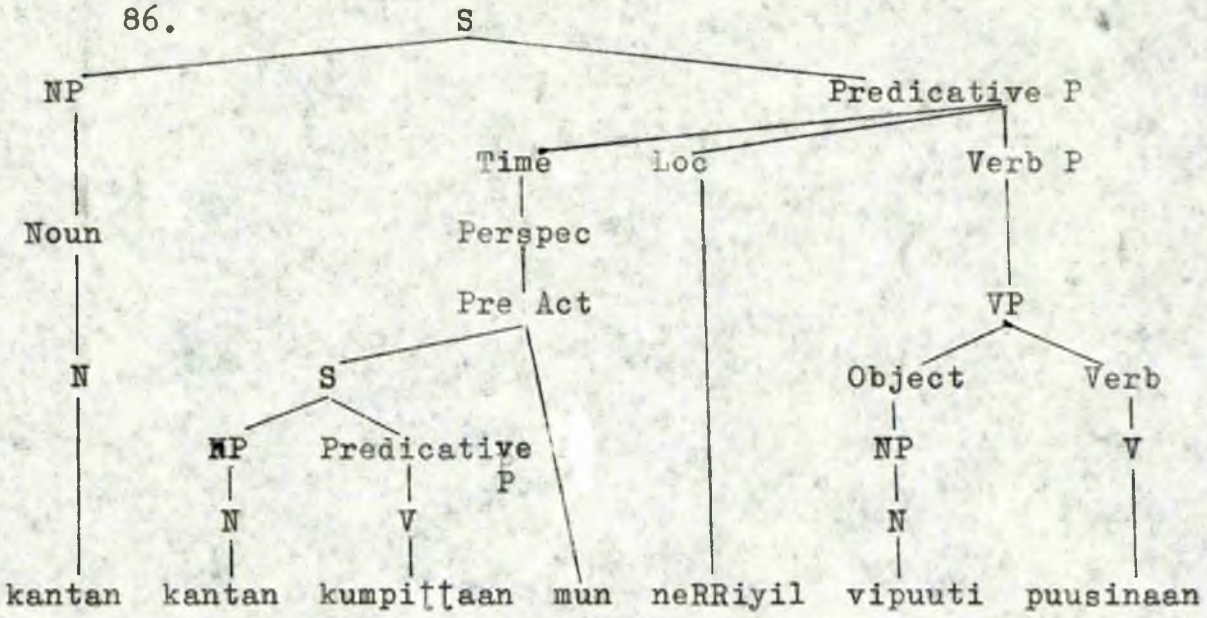
$$VB_1 \neq \left\{ \begin{matrix} V_{Cop}\ Iden \\ V_{Pos}\ \text{where}\ V_{Pos} / \left\{ \begin{matrix} \underline{aaka} \\ \underline{ul} \end{matrix} \right\} \end{matrix} \right\}$$

$$Tense_1 = Tense_2$$

$$A = W\ /\ Time \neq T_{Con}$$

One tree of derivation will suffice to illustrate the main processes carried out by the Ts 14 to 21. The derivational structure of 51 above is provided by the following simplified tree, which does not take note of the positional change wrought by T 13.

86.



The next group of Adverbialization transformations to be considered are Locative. They are the transformations based on the PS nodes, $\underline{Com_1}$ and $\underline{Com_2}$ (PS 23). The transformation based on the first of these nodes accounts for sentences like

87. pillay vilaaviliruntu taamatamaaka tirumpinaan.
"The child returned late from the carnival." ,

derived by embedding

88. pillay vilaavil iruntaan.
"The child was at the carnival."

in $\underline{L}$ position in

89. pillay $\underline{L}$ taamatamaaka tirumpinaan.
"The child returned late."

The embedded sentence in this transformation must be an affirmative statement whose verb is the V_{Pos} , iru. This verb is required to take a Loc expansion, which may not, however, be either Comm or Conclu. The subject NP of the embedded sentence is, moreover, required to be identical with the subject NP of the matrix. The transformation deletes this item from the embedded sentence, and converts the V_{Pos} into its Past participial form. The rule below will introduce the participle, but leave it to a later rule to adjust the tense(see T 97).

T 22 Locative Adverb: Commencement 1

$$W - NP_{1subl} - X - Loc \hat{} NP_{2sub2} \hat{} V_{Pos} \hat{} Tense - Z \Rightarrow$$

$$W - NP_{1subl} - X - Loc \hat{} V_{Pos} \hat{} Tense \hat{} Part. - Z$$

where $Loc...Tense \; / \; Com_1$

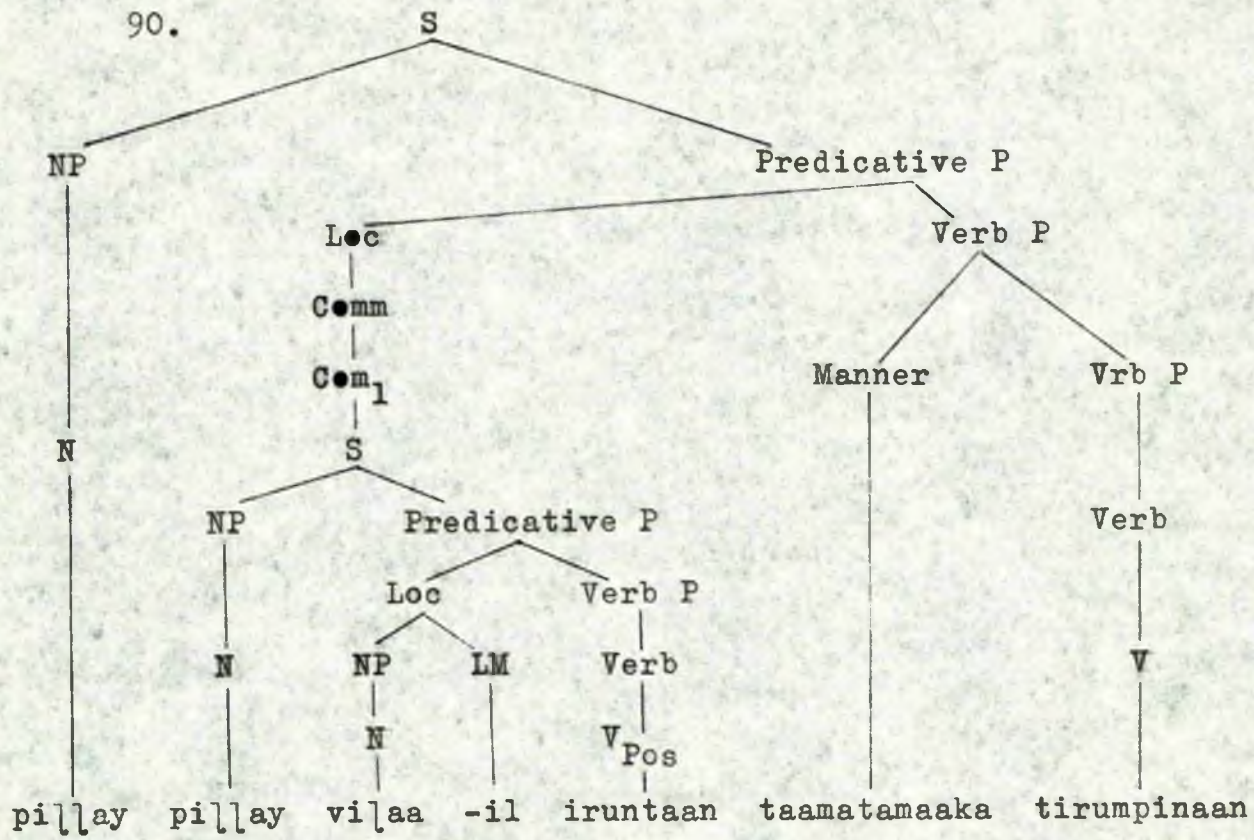
$Loc \neq \{Comm, Conclu\}$

$NP_1 = NP_2$

$V_{Pos} \; / \; iru$

The derivational structure of 87, which was derived by means of T 22, is shown by the following simplified tree of derivation

90.



The transformation based on the node $\underline{Com_2}$ embeds sentences like

91. nakaykaḷ peṭṭiyil iruntana.

"The jewellery was in the box."

in L position in sentences like

92. tiruṭan nakaykaḷay L eṭuttaan.

"The thief took the jewellery."

to derive sentences like

93. tiruṭan nakaykaḷay peṭṭiyiliruntu eṭuttaan.

" The thief took the jewellery from the box."

This transformation differs from T 22 in two respects. One of these, which has already been indicated in the lexicon, is that fewer verbs choose $\underline{Com_2}$ as an expansion in the base than choose $\underline{Com_1}$. The other is that the subject NP of the embedded sentence is required to be identical not with the subject NP but with the object NP of the matrix. In all other respects T 23 behaves in the same way as T 22, so much so that the tree 90 suffices to indicate the derivational processes involved in strings produced by it too.

T 23 Locative Adverb: Commencement 2

$$W - Loc \hat{} NP_{1sub} \hat{} V_{Pos} \hat{} Tense - X - NP_{2obj} - Z \Rightarrow$$

$$W - Loc \hat{} V_{Pos} \hat{} Tense \hat{} Part. - X - NP_{2obj} - Z$$

where $Loc \ldots Tense \; / \; Com_2$

$Loc \neq \begin{Bmatrix} Comm \\ Conclu \end{Bmatrix}$

$NP_1 = NP_2$

$V_{Pos} \; / \; \underline{iru}$

The Adverb of Purpose transformation formalizes the processes by which for example

94. vivasaayi veyyil kuuṭa mun vayalay uḻuvaan.

"The farmer will plough the field before the sun becomes too hot."

is embedded in PA position in

95. vivasaayi ayntu maṇikku PA eḻumpinaan.

"The farmer rose at five o'clock."

to produce

96. vivasaayi veyyil kuuṭa mun vayalay uḻuvataRkaaka ayntu maṇikku eḻumpinaan.

"The farmer rose at five o'clock to plough the field before the sun became too hot."

(The Purpose and Time elements in 96 have been rearranged to give a more elegant reading.) The conditions on the transformation are as follows. The subject NPs of the matrix and embedded sentences must be identical. The verb in the embedded sentence, which must be an affirmative statement, cannot be an Irregular Impersonal verb, either of the V_{Pos} verbs, aaka or uḻ, or $V_{Cop\ Iden}$. If this verb is a re-regularized V_{Imp}, it must be teri. If it is the V_{Pos}, iru, it is not permitted to take Rec as an expansion. Two final restrictions on this verb are that a) it cannot take a Modal as a modifier, and b) it must inflect for the Future tense. The transformation deletes the subject NP of the embedded sentence. Strings produced by the transformation will be obligatorily sent

on to the General Nominalization transformation (T 37), which will nominalize the embedded sentence, and from there to a Case Assignment rule (either T 62 or T 63), which will assign the nominalized sentence the dative or the possessive case marker depending on the postfix which follows it. If the postfix which follows this sentence is aaka, the string in which it has been embedded will proceed to a later optional deletion rule (T 83) which will delete this postfix. When this happens, the resulting string qualifies for entry into yet another optional transformation, T 84, which will delete the tense marker of the verb in the embedded sentence and convert it into its infinitival form. If 96 opts to pass through T 83, the resulting sentence is

97. vivasaayi veyyil kuuṭa mun vayalay uḷuvataRku ayntu maṇikku eḷumpinaan. ,

while if 97 opts to pass through T 84, the resulting sentence is

98. vivasaayi veyyil kuuṭa mun vayalay uḷa ayntu maṇikku eḷumpinaan.

The last two transformations discussed do not affect the meaning of the strings they operate on, so that 96, 97 and 98 are synonymous.

T 24 Adverb of Purpose

$$W - NP_{1subl} - X - NP_{2sub2} \hat{} B \hat{} VB_2 \text{ (Asp) Fut} \left[\begin{array}{l}\underline{\text{poruṭṭu}}\\ \underline{\text{nimittam}}\\ \underline{\text{aaka}}\end{array}\right] -$$

$$Y - VB_1 - Z \Rightarrow$$

$$W - NP_{1subl} - X - B \hat{} VB_2 \text{ (Asp) Fut} \left[\begin{array}{l}\underline{\text{poruṭṭu}}\\ \underline{\text{nimittam}}\\ \underline{\text{aaka}}\end{array}\right] - Y - VB_1 - Z$$

where $NP_2 \ldots Fut \not/$ Irregular Impersonal Pattern

$NP_1 = NP_2$

$VB_2 \not/ V_{Imp}$ unless V_{Imp} / **teri**

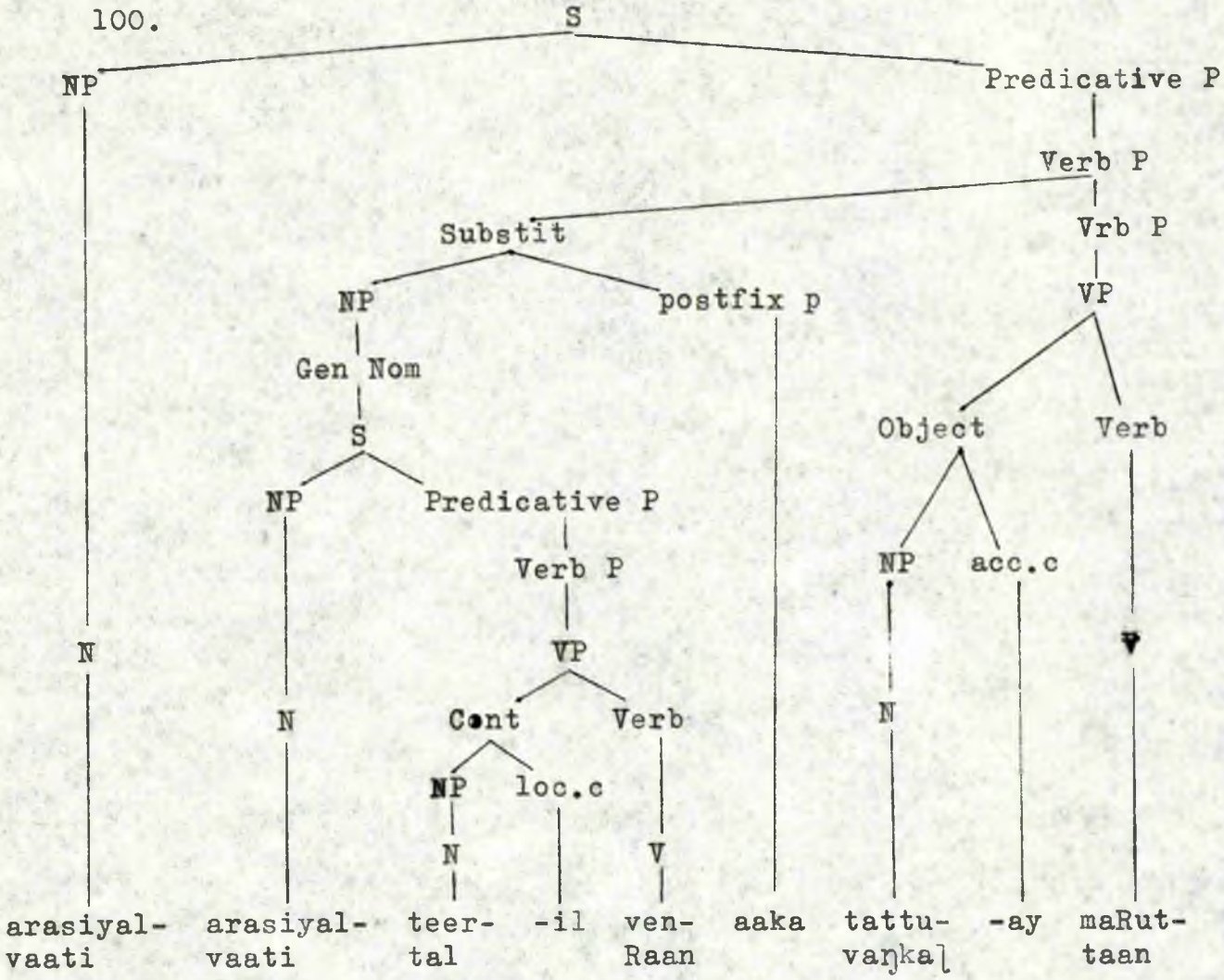
$B \not\in$ Rec if VB_2 / V_{Pos}

The following is a simplified tree of derivation for the sentence

99. arasiyalvaati teertalil velluvataRkaaka tattuvaŋkaḷay maRuttaan.
"The politician sacrificed his principles to win the elections." ,

which is derived by means of T 24.

100.



The Adverbial transformation of Reason formalizes the processes by which for example

101. maarkaḷi maatattil maḻayaay irukkiRatu.

"It is rainy in December."

would be embedded in RA position in

102. RA maarkaḷi maatattil rammukku kaḷḷu vaṭikka muṭiyavillay.

"Ramu cannot tap toddy in December."

to produce

103. maarkaḻi maatattil maḻayaay irukkiRa paṭiyaal raamukku kaḷḷu vaṭikka muṭiyavillay.

"Because it is rainy in December, Ramu cannot tap toddy."

The major restriction on the operation of the transformation is that the verb in the embedded sentence must not take a Possib Modal. The transformation converts the last verbal element in the embedded sentence into its conjunctival participial form, and adds the compound particle paṭiyaal to it. If the verb in the embedded sentence inflects for the Future tense, the string produced by the transformation is subjected to a low level rule which obligatorily converts the tense marker to Present (T 98).

103 has an alternative form,

104. maarkaḻi maatattil maḻayaay irukkiRataal raamukku kaḷḷu vaṭikka muṭiyavillay. ,

which is accounted for by a rule which follows the Reason transformation. This rule, which is optional, deletes the Conjunctive Participle and the first part of the compound particle, paṭiyaal, in strings into which they had been introduced by the Reason transformation. It then sends these strings on to the General Nominalization transformation (T 37) which obligatorily nominalizes the sentence embedded in them by the Reason transformation. The only condition on the transformation under discussion is that the verb of the sentence embedded by the Reason transformation in

the strings it operates on must inflect for tense.

T 25 Adverb of Reason

NP_{1subl} ^ B ^ VB_1 ^ Modif - W - NP_{2sub2} - X - VB_2 - Z ⇒

NP_{1subl} ^ B ^ VB_1 ^ Modif ^ Conj.Part. ^ paṭiyaal -

W - NP_{2sub2} - X - VB_2 - Z

where NP_1...Modif / Reason

Modif ⊄ Possib

T 26 (Optional) Reduction of the Reason Particle

X - VB_1 - Aux - Tense - Conj.Part. - paṭiyaal - Z ⇒

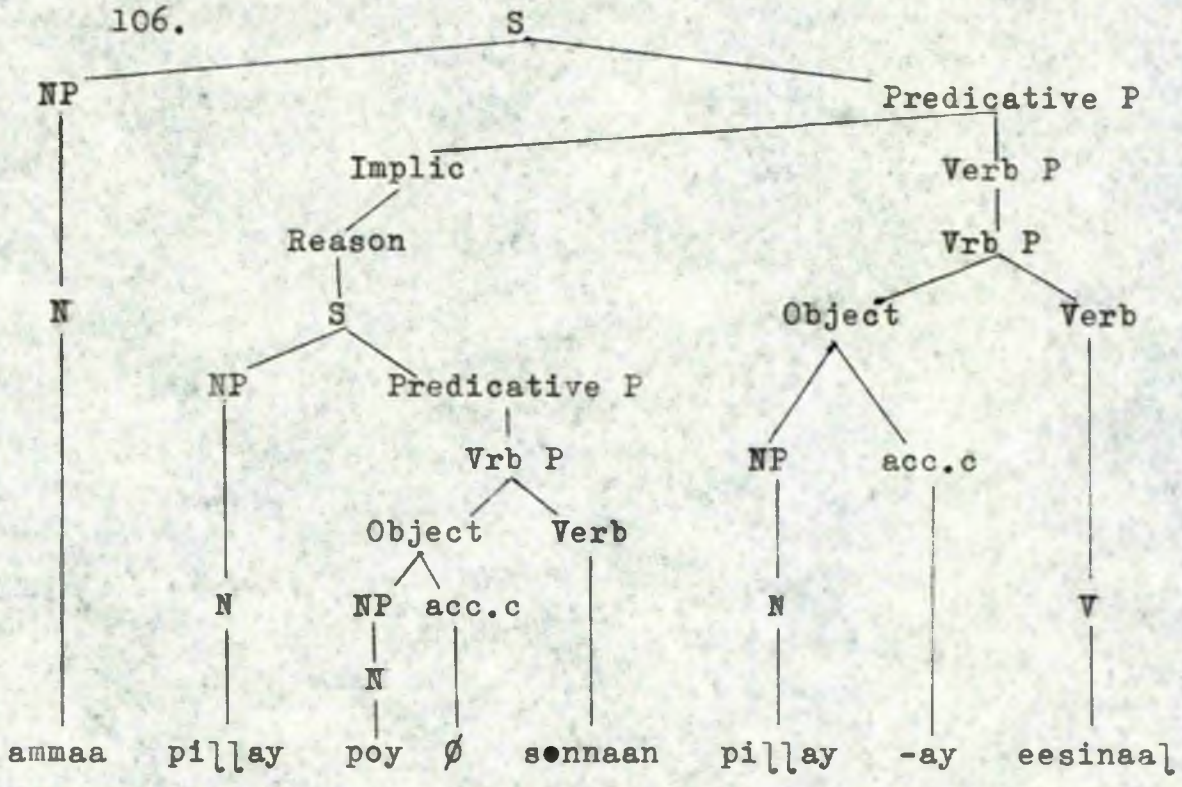
X - VB_1 - Aux - Tense - aal - Z

The tree below represents the derivational processes that underlie

105. pillay poy sonna paṭiyaal, ammaa avanay eesinaaḷ.

"Because the child told a lie, his mother scolded him." , a sentence produced by means of T 25.

106.



The Adverbial transformation of Condition will be taken up next. Some of the operations involved in it are illustrated by

107. kantan natantatay vilakkinaal avanutaya nanpan tukkappatuvaan.
"If Kandan explains what happened, his friend will feel sorry." ,

which is formed by embedding

108. kantan natantatay vilakkinaan.
"Kandan explained what happened."

in C position in

109. C avanutaya nanpan tukkappatuvaan.
"His friend will feel sorry."

As here illustrated, the transformation operates as follows. It converts the last verbal element of the embedded sentence into its conjunctival participial form, and adds the particle -aal to it. If this element carries any non-Past tense marker, it sends the string to which it belongs on to a Tense Adjustment rule(T 97), which will convert this tense marker to Past. In most cases, the conversion of a verbal element into its conjunctival participial form consists in the addition of the suffix -a to the tense marker it carries. Where the verbal element involved does not inflect for tense, slightly different processes take place. If this element is the V_{Pos}, aaka, or $V_{Cop\ Iden}$, the addition of the suffix is accompanied by a change in the form of the verb itself, the resulting form being aana. This is illustrated by

110. eŋkeeyaavatu kuḻappamaanaal murukan kiṭṭa irukka veeṇṭum.
"If there is confusion anywhere, Murukan has to be somewhere around."

(107 and 110 demonstrate that when the conjunctival participial suffix -a joins the particle -aal, it is elided. The factors involved in this process are, however, purely phonological, and they will not, therefore, be accounted for below.)

When the last verbal element in the embedded sentence is a tenseless element other than the V_{Pos}, aaka, or $V_{Cop\ Iden}$, the conjunctival participial affix assumes the form -aana. The verbal

element itself undergoes no change, but it is assigned its usual inflection, the neutral -um, by the Concord rule (T 67). This differentiates it from all other verbal elements which cannot, once they have adopted their conjunctival participial forms, be assigned any concordial inflections. The kind of form which results in this case is illustrated by

111. kantanukku teetaṉṉi veeṭumaanaal manayvikku solluvaan.
"If Kandan wants tea, he tells his wife."

The points made above about the shape of the conjunctival participial suffix are essentially morphophonemic, and will not, therefore, be accounted for at this juncture.

When the Condition transformation embeds 108 in C position in 109, it can, as an alternative to the processes described above, carry out processes of the kind which produce

112. kantan naṭantatay viḷakkuvaanaanaal avanuṭaya naṉpan tukkappaṭuvaan. ,

a sentence that is synonymous with 107. The main condition on the choice of this alternative is that the verb in the embedded sentence should inflect for tense. In producing 112, the transformation merely adds the compound particle -aanaal to the embedded sentence, and sends the string to which it belongs first to the Concord rule (T 71), which assigns the verb in the embedded

sentence inflections of gender, number and person that put it into concord with its subject, and then to a Tense Adjustment rule (T 100), which converts any non-Future tense marker carried by the verb in the embedded sentence to Future.

To the particles, -aal and -aanaal, the suffix -um may be added to give the meaning "although" or "even if". Thus 107, for example, may be expanded to

113. kantan naṭantatay viḷakkinaalum avanuṭaya naṇpan tukkappaṭuvaan.
"Even if Kandan explains what had happened, his friend will feel sorry."

A final point about the Condition transformation is that if the verb in the matrix sentence inflects for tense, it must inflect for the Future tense. At times, indeed, this verb will be found to inflect for the Present tense, but this apparent departure from the rule just given will be accounted for by a later optional Tense Adjustment rule (T102), which will indicate that in certain contexts the function of the Future tense inflection may be performed by the Present tense inflection.

T 27 Conditional Adverb

T 27.1 Tenseless Verbal Elements

$$A \begin{bmatrix} VB_1 \\ Modal \end{bmatrix} B - W - VB_2 - X - (Fut) - Z \Rightarrow$$

$$A \begin{bmatrix} VB_1 \\ Modal \end{bmatrix} B \hat{} \text{Conj. Part.} \hat{} \underline{\text{-aal}}\ (\underline{\text{-um}}) - W - VB_2 -$$

$$X - (\text{Fut}) - Z$$

where $A \ldots B$ / Condi

$$VB_1 \ / \ \begin{Bmatrix} V_{\text{Cop Iden}} \\ V_{\text{Pos}} \ / \ \underline{\text{aaka}} \\ V_{\text{Imp}} \end{Bmatrix}$$

$B \not\subset$ Tense

T 27.2 General

$$A \hat{} VB_1 \hat{} B - W - VB_2 - X - (\text{Fut}) - Z \Rightarrow$$

$$A \hat{} VB_1 \hat{} B \begin{Bmatrix} \text{Conj. Part.} \\ \underline{\text{aana}} \end{Bmatrix} \underline{\text{-aal}}\ (\underline{\text{-um}}) - W - VB_2 -$$

$$X - (\text{Fut}) - Z$$

where $A \ldots B$ / Condi

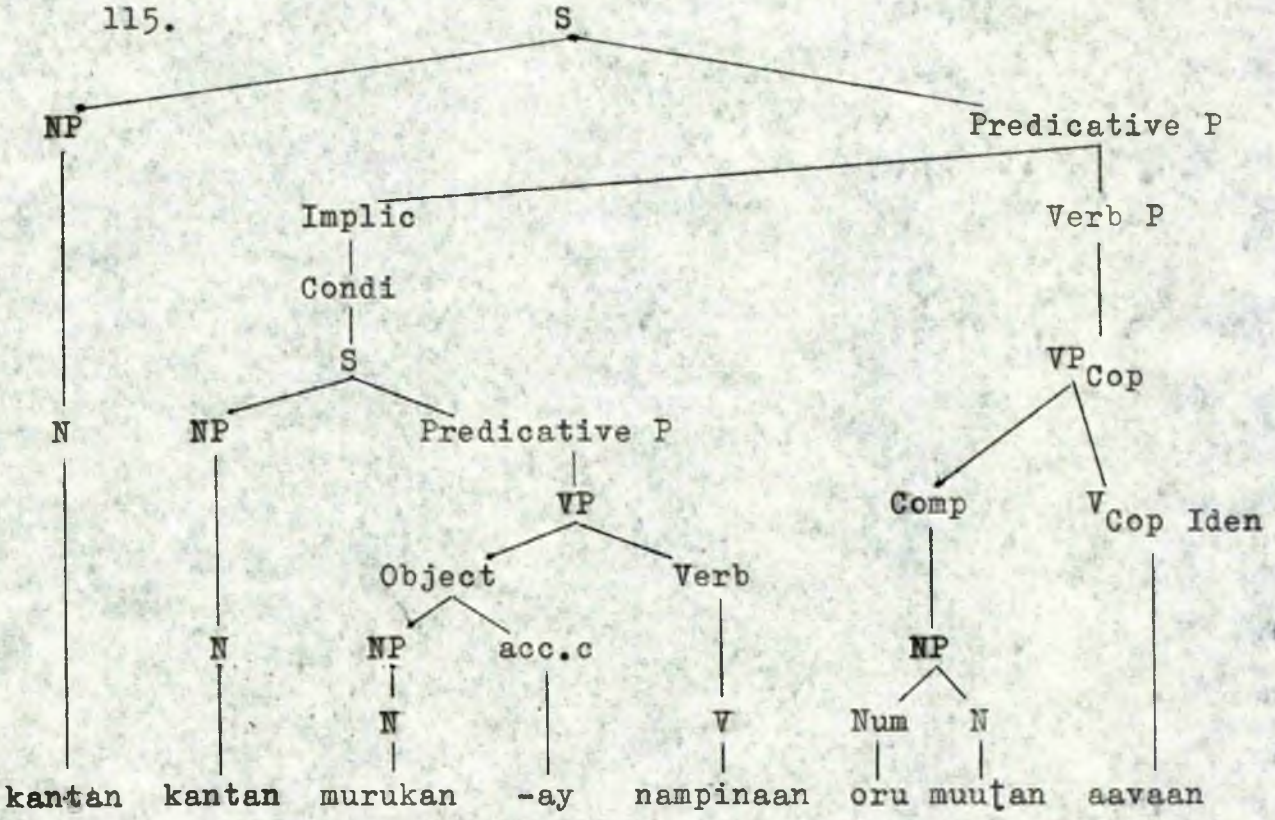
B c Tense

The kind of process carried out by T 27 is represented by the following simplified derivational tree, which would be associated with

114. murukanay nampinaal kantan oru muuṭan (aavaan).

"If Kandan trusts Murukan, he is a fool."

115.



The last of the Adverbializations to be considered are the Manner Adverbializations. At the outset, it must be admitted that the interpretation of the processes involved in one or two of them may appaar to be somewhat contrived. Nevertheless, no more economical and descriptively adequate way of handling them has suggested itself, and until such an alternative is forthcoming, the rules below will be presented as those that appear to be the most satisfactory.

The various Manner Adverbialization rules below will all be found to share one feature in common: the transforms produced by them will contain either the particle poola, or an element which has two freely variable forms, aay and aaka. It will be convenient in the discussion below to regard these elements as markers of the Manner Adverbialization transformations, even though, strictly speaking, the term "marker" does not appear to be appropriate for them. These two markers display at times great surface similarity, but there are certain very significant formal distinctions between them that make it necessary to keep them apart. Thus although on the surface there appears to be no structural difference between

116. raaman to|ilaa|arka|in talayvanaaka peesinaan.
"Rama spoke as the leader of the workers." ,

where the aaka marker is used, and

117. raaman to|ilaa|arka|in talayvan poola peesinaan.
"Rama spoke like the leader of the workers." ,

where the poola marker is used, a deeper investigation will reveal that the two are derived in considerably different ways. The former is derived by embedding the copulative sentence

118. raaman to|ilaa|arka|in talayvan (aavaan).
"Rama is the leader of the workers."

in M position in

119. raaman M peesinaan.
"Rama spoke ____."

On the other hand, 117 is derived by deletion from a longer version of it,

120. to⌊ilaa⌊arka⌊in talayvan peesinatu poola raaman peesinaan.
"Rama spoke in the manner in which the leader of the workers spoke." ,

which in turn is derived by embedding the non-copulative sentence

121. to⌊ilaa⌊arka⌊in talayvan peesinaan.
"The leader of the workers spoke."

in M position in 119. These differences apart, it will be seen that the rules which involve aay/aaka always have to observe more restrictions than those involving poola. From the formal distinctions just described stems an important semantic distinction: poola is used to compare two actions or situations with a view to indicating their similarity, while aay/aaka is used to establish their relationship or even identity without making any such comparison.

The first four rules presented below will not pose problems of the kind referred to at the commencement of the current

section on Manner Adverbializations. The processes involved in the first of these have already been illustrated by 120. These are as follows. The transformation adds the particle poola to the embedded sentence and sends it on to the General Nominalization transformation (T 37) for obligatory nominalization. There are certain restrictions that the transformation is required to observe. One is that if the main verb of either of the sentences involved is $V_{Cop\ Iden}$, a V_{Pos} or a V_{Imp}, then the main verb of the other sentence must be identical with it. A second is that if the main verb of one of the sentences involved takes Neg as a modifier, so must the main verb of the other. To illustrate the first of these restrictions, a sentence like

122. kantanukku uṇmayay teriyum.
"Kandan knows the truth." ,

which has an Irregular Impersonal verb, may not be embedded by the transformation under discussion in, for example, 119, but will require a matrix like

123. murukanukku uṇmayay teriyum.
"Murukan knows the truth." ,

which has the same Irregular Impersonal verb, to produce a sentence like

124. kantanukku uṇmayay terivatu poola murukanukku uṇmayay teriyum.
"Just as Kandan knows the truth, Murukan knows it."

Various reductions of the strings produced by the transformation under discussion are possible, but they will be held over until the deletion rules.

T 28 Adverb of Manner: Comparative

$$NP_{1subl} \hat{} B \hat{} VB_1 \text{ (Modif)} - W - NP_{2sub2} - X - VB_2 - Z \Rightarrow$$

$$NP_{1subl} \hat{} B \hat{} VB_1 \text{ (Modif) } \underline{\text{poola}} - W - NP_{2sub2} - X - VB_2 - Z$$

where $NP_1 \ldots$(Modif) / Man Comp

$$VB_1 = VB_2 \text{ if } \left\{\begin{matrix} VB_1 \\ VB_2 \end{matrix}\right\} / \left\{\begin{matrix} V_{\text{Cop Iden}} \\ V_{\text{Imp}} \\ V_{\text{Pos}} \end{matrix}\right.$$

(Modif) c Neg only if Z c Neg

The second of the Manner Adverbialization rules is the rule by which 118 was embedded in M position in 119 to give 116. This rule requires the embedded sentence to be a positive sentence of the pattern NP ^ Comp ^ $V_{\text{Cop Iden}}$. Theoretically, the verb in the matrix may be any verb but a V_{Imp}, a V_{Pos} or $V_{\text{Cop Iden}}$. The subject NP of the two sentences involved must be identical. If the conditions set out above are satisfied, the transformation

deletes the subject NP from the embedded sentence, and adds to its $V_{\underline{\text{Cop Iden}}}$ an adverbializing particle. A morphophonemic rule which will not be stated in the present work will specify that $V_{\underline{\text{Cop Iden}}}$ ^ the adverbializing Particle gives either <u>aaka</u> or <u>aay</u>. What is treated in the discussion as an adverbial marker is, therefore, a compound form, one component of which, $V_{\underline{\text{Cop Iden}}}$, is not intrinsically an adverbial element at all.

T 29 <u>Adverb of Manner: Identificational</u>

$$W - NP_{1subl} - X - NP_{2sub2} \hat{} Comp \hat{} V_{\underline{\text{Cop Iden}}} - VB - Y \Rightarrow$$

$$W - NP_{1subl} - X - Comp \hat{} V_{\underline{\text{Cop Iden}}} \hat{} Adv.\ Part. - VB - Y$$

where $NP_2 \ldots V_{\underline{\text{Cop Iden}}}$ / Identif C

$NP_1 = NP_2$

$$VB \neq \begin{Bmatrix} V_{Imp} \\ V_{Pos} \\ V_{\underline{\text{Cop Iden}}} \end{Bmatrix}$$

The next two rules also produce transforms which contain the marker <u>aay/aaka</u>. These rules differ from T 29 primarily in that they embed not a sentence containing $V_{\underline{\text{Cop Iden}}}$, but one containing the $V_{\underline{\text{Pos}}}$, <u>aaka</u>. The processes these rules will account

for are illustrated by

125. eeḷay rikʃookaaran pasiyaay iruntaan.

"The poor rickshawman was hungry."[5]

and

126. miinpiṭippavarin kuṭisay iruḷaay iruntatu.

"The fisherman's hut was dark."

125 is produced by embedding

127. eeḷay rikʃookaaranukku pasi (aakum).

[[There is hunger to the poor rickshawman]]

in M position in

128. eeḷay rikʃookaaran M iruntaan.

[[The poor rickshawman was ...]],

and 126, by embedding

129. miinpiṭippavarin kuṭisayil iruḷ (aakum).

[[Darkness is in the fisherman's hut]]

in M position in

130. miinpiṭippavarin kuṭisay M iruntatu.

[[The fisherman's hut was ...]] .

T 30 will account for the derivation of 125, T 31 for the derivation of 126. Both T 30 and T 31 require the subject NP of the matrix sentence to be identical with a NP in the embedded sentence. In T 30,

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5. The translations provided of many of the sentences cited here and in the discussion of the Manner Adverbializations that follow are inadequate, and tend to obscure the processes that have taken place in the derivation of these sentences. Where possible, a literal non-idiomatic "translation" is provided with the aim of throwing light on these processes.

this latter NP is required to be developed from the node Rec, while in T 31, it is required to be developed from the node Loc. In both cases this NP is deleted, along with any form that may have been affixed to it, and the verb of the embedded sentence is converted to its adverbial participial form. In T 30, the verb of the embedded sentence is prohibited from taking a Time expansion, while the verb of the matrix sentence is prohibited from taking a Rec expansion. Moreover, any Loc expansion taken by the verb of the embedded sentence is required to be identical with a Loc expansion taken by the verb in the matrix. The transformation will delete this expansion from the embedded sentence. In T 31, the verb of the embedded sentence is prohibited from taking a Time or a Rec expansion. The verb of the matrix sentence involved in it must be the V_{Pos} , iru.

T 30 Adverb of Manner: Immediate Condition - Personal

$$W - NP_{1subl} - (Loc_1) - A\ (Loc_2)\ NP_{2sub2} \hat{}\ \underline{NP_3 \hat{}\ dat.c}_{Rec} \hat{}$$

$$V_{Pos} - Y - VB - Z \Longrightarrow$$

$$W - NP_{1subl} - (Loc_1) - A \hat{}\ NP_2 \hat{}\ V_{Pos} \hat{}\ Adv.\ Part. -$$

$$Y - VB - Z$$

where $A...V_{Pos}$ / IC Perso

V_{Pos} / aaka

$NP_1 = NP_3$

$\begin{Bmatrix} W \\ Y \end{Bmatrix} \not\in$ Rec

$A \neq$ Time

$Loc_1 = Loc_2$

Loc_2 is chosen only if Loc_1 is chosen.

T 31 Adverb of Manner: Immediate Condition - Non-Personal

$$W - NP_{1subl} - X - A \hat{} NP_{2sub2} \hat{} \underline{\quad NP_3 \quad} \hat{} B_{Loc} \hat{} V_{Posl} -$$

$$Y - V_{Pos2} - Z \Rightarrow$$

$$W - NP_{1subl} - X - A \hat{} NP_2 \hat{} V_{Posl} \hat{} \text{Adv. Part.} - Y -$$

$$V_{Pos2} - Z$$

where $A...V_{Posl}$ / IC Non-Perso

V_{Posl} / aaka

V_{Pos2} / iru

$NP_1 = NP_3$

$A \not\in \begin{Bmatrix} \text{Time} \\ \text{Rec} \end{Bmatrix}$

The problem Manner Adverbializations referred to earlier account for the derivation of sentences like

131. eeḷay rikʃookaaranukku pasiyaay iruntatu.
"The poor rickshawman was hungry."

and

132. miinpiṭippavarin kuṭisayil iruḷaay iruntatu.
"It was dark in the fisherman's hut."

(As will become evident presently, the identity of the translations offered for 131 and 125 is misleading.) Though these sentences are perfectly acceptable and common, they present difficulties by virtue of the fact that their main verb, iruntatu "was", takes no subject NP. Their subjectlessness is a radically different kind of phenomenon from the subjectlessness of sentences like 27 in Chapter II. The subjectlessness of 27 in Chapter II has been discussed in full (see pp. 79f.). Nevertheless, it will contribute to the clarification of the present discussion to briefly reiterate some of the points relating to it. It was argued that the subjectlessness of 27 in Chapter II was the result of an optional low-level transformation which had deleted its subject pronoun. The unique identification of the deleted subject was made possible by the concordial suffixes that the verb had been assigned before the deletion had taken place. Once the subject had been identified, it became possible to reconstruct the bi-partite source sentence from which the mono-partite sentence had been derived. Returning to the problem at hand, it

will be found that although the subject NPs of sentences like 131 and 132 can apparently be identified in the same way as the subject NP of 27 in Chapter II (this matter will be fully explored below), no actual sentences containing these NPs are possible. That is, there are no sentences

133. * atu eeɻay rikʃookaaranukku pasiyaay iruntatu.

and

134. * atu miinpiʈippavarin kuʈisayil iruɻaay iruntatu.

from which 131 and 132 may respectively have been derived. Clearly, then, the subjectlessness of 131 and 132 has to be explained differently from the subjectlessness of 27 in Chapter II. The decision to treat 131 and 132 in terms of an embedding Manner Adverbialization transformation is motivated by the fact that these sentences contain phrases that resemble closely both in form and function adverbial phrases derived in other sentences by means of Manner Adverbialization transformations such as T 30 and T 31. (Details confirming this statement will be provided during the discussion below.)

While there is good reason to account for each of the sentences 131 and 132 by means of a Manner Adverbialization rule, the characterization of these rules poses certain highly complicated problems. Subjectless sentences like 131 and 132 are clearly different from sentences like 125 and 126 produced by Ts 30 and 31 respectively. Nevertheless, there are certain close resemblances between 131 and

and strings such as 125 produced by T 30, and between 132 and strings such as 126 produced by T 31. The resemblances are so close that to the native user such strings may indeed be at times well nigh synonymous. (For ease of exposition, the following discussion will confine itself to the resemblances and differences between 131 and 125. It is to be assumed that what is said of them is of equal relevance to the relationship between 132 and 126.) The near synonymity of 131 and 125 is to be explained by the fact that in the production of both it is the same sentence that has been embedded. Any attempt to press the resemblances further to the extent of suggesting that both 131 and 125 are produced as alternatives by one and the same transformation (in this case, a modified T 30) will, however, prove unsuccessful. The reasons for this are as follows. If the sentences are both derived by means of a modified T 30, it would mean that the matrix sentence for both of them would have to be 128, a sentence whose verb iru carries a Third Person Masculine Singular inflection that puts it in concord with its subject. In 131, however, the verb iru, which has been brought into the sentence from the matrix, takes the Third Person Inanimate Singular inflection. The fact that this verb does not in 131 take an inflection which puts it into concord with the Third Person Masculine Singular subject of the supposed matrix can, it is true, be accounted for by the ordering of the rules - the deletion of this subject can be accomplished before the string reaches the Concord rule. The basic problem would, however, be left unsolved, for absolutely no motivation would be provided for the verb having

chosen the particular inflection that it has.

Any attempt to explain the resemblances between 131 and 125 by deriving the former from the latter will prove equally unsuccessful. For one thing, the problem of the inflection taken by iru in 131 will still remain unsolved. For another, the intuition that Rec in 131 has been received into it from the embedded sentence will be ignored. To expand on the latter point, in 125 Rec has been deleted, and a transformation which attempts to derive 131 from 125 will have to independently re-introduce this element into the string, thus violating the user's intuition about the source of Rec in 131. A further objection to such a transformation is that it will exceed the limits of its powers by introducing a deep structural unit into the strings it operates on.

Certain other factors lend their support to this transformational non-identification of 131 and 125. One is that processes that are very similar to those that have taken in 131 are seen to operate in sentences like

135. eeɭay rikʃookaaranukku pasi poola irukkiRatu.
"It looks as though the poor rickshawman is hungry." ,

where the major surface difference from 131 is that the adverbial marker poola is used instead of the adverbial marker aaka. The undoubted relationship between 131 and 135 cannot be acknowledged if 131 is derived from 125 for poola does not operate in sentences

paralleling 125 in the way that 135 parallels 131.

In addition to the derivational distinction between 131 and 125, there is a semantic distinction. It is not easy to provide a precise formulation of this semantic distinction, but some pointers to it may be noted. It was stated earlier that 125 was produced by embedding 127 in 128. If the processes that take place when this happens are artificially broken down into stages for the purposes of explication, at the first stage the resulting string would have the shape (re-arranged for the sake of convenience)

136. eeɭay rikʃookaaran - eeɭay rikʃookaaranukku pasi aakum - iruntaan.
[[The poor rickshawman - the poor rickshawman was hungry - was]] .

If it is assumed that at the next stage the only change made is the introduction of the Adverbial Particle, the resulting string will be

137. eeɭay rikʃookaaran - eeɭay rikʃookaaranukku pasiyaay - iruntaan.
[[The poor rickshawman was as (though) the poor rickshawman is hungry]] .

On the other hand, 131 translates literally as follows:

138. [[(It) was as (though) the poor rickshawman is hungry]]

In these highly awkward and artificial "translations", some at least of the semantic difference between sentences produced by T 30 and sentences like 131 may be perceived. Primarily, it appears to be a matter of relative immediacy or involvement. 131 sees the situation less immediately, more impersonally, more from the point of view of the speaker than from the point of view of the participant in the situation; 125 sees it more immediately, from the point of view of the participant. This is highly dangerous ground to tread on, but it merely follows from the structural reasons already set out for distinguishing 131 and 125.

The conclusion that may be drawn from the preceding discussion is that 131 and 125 must be derived by means of different transformations. Since the arguments advanced during the course of this discussion are of equal relevance to the treatment of 132 and 126, they will justify the derivation of these too by means of different transformational rules.

This brings on the next set of problems, which concern the precise nature of the rules involved. Throughout the discussion it has been assumed that the rules must be transformational. The assumption is justified by the fact that it is inadvisable to generate the sentence type concerned by mere constituent expansion, that is, by the mere addition of the verb iru as a constituent to the sentences involved in the base rules. Since iru is the main verb of such sentences, such a treatment would mean that the base

rules will generate subjectless sentences. This results in the increase of the basic sentence patterns of Tamil to two, a bi-partite pattern which explains much the largest part of the grammar, and a mono-partite pattern which accounts for a small irregular aspect of it. As will be argued below, such an analysis is unsatisfactory, for the most economical treatment of the problem is in terms of a bi-partite pattern to which the irregular minority pattern may be referred.

If the pattern under discussion is not to be produced by the base rules, it might still be suggested that sentences like 131 should be derived by means of a transformation which introduces the verb iru into the Predicative Phrase of a single source sentence, which in this case will be 127. Such a proposal has certain strong disadvantages.[6] Firstly, if iru is introduced into 131 in this manner, it will have to be distinguished from the base unit, iru, the $V_{Pos.}$. The distinction can be justified if the two items behave differently from each other, that is, if they take different expansions and so on. The fact is, however, that they do not behave differently, and that they are very much a single unit. In the face of this point it might still be argued that the proposal made above might become acceptable if it can be shown that the expansions taken by iru in sentences like 131 are dependent on the Predicative Phrase into which it has been introduced, that is, if

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6. Lees discusses a problem similar to this in Lees (1963). Some of the arguments which follow have been suggested by certain comments made by Lees about a similar proposal regarding his problem.

these expansions have been assigned it from the Predicative Phrase. It will, however, be found that the expansions taken by iru in 131 cannot be so accounted for. The Predicative Phrase in 127, into which it is suggested that iru be introduced, has as its main verb the V_{Pos}, aaka, which, as the PS rules and lexicon have revealed, is highly restricted with regard to the expansions it may take. It cannot, for example, take a Past Time expansion like neeRRu "yesterday", as the ungrammaticality of

139. * neeRRu eeɭay rikʃookaaranukku pasi aakum.

shows. In 131, however, iru can take this expansion, to give

140. neeRRu eeɭay rikʃookaaranukku pasiyaay iruntatu.
"Yesterday, the poor rickshawman was hungry."

This clearly demonstrates that iru in 131 takes its expansions independently of the Predicative Phrase of 127. If then its presence in 131 is to be explained in terms of a transformation which has introduced it into the Predicative Phrase of 127, the onus of specifying the expansions it can take will fall on this transformation. It is highly unlikely that a transformational rule can successfully discharge this function, but even if this were possible, the rule would be highly uneconomical, for it would contain nothing more than a repetition of the information that has already been provided about the V_{Pos}, iru, in the base.

A second, theoretical, objection to the proposal discussed in the preceding paragraph is that it requires a transformational rule to introduce deep structural elements.

In the light of such considerations, it appears that the most useful characterization of the particular aspect of sentencehood under discussion is in terms of an embedding transformation, the subject of whose matrix sentence is obligatorily deleted at some stage in the grammar. Again it must be pointed out that although the discussion was confined to problems raised by 131, the points which were made are equally relevant to the problems raised by 132.

This conclusion leads to the final problem, the constituency of the two sentences involved in each case. The embedded sentence raises no disputes in this respect. For 131, it is clearly 127, for 132, 129. The restrictions on the sentence embedded in the specified Manner Adverbial position by the transformation which produces sentences like 131 (this will be labelled the Non-Immediate Condition - Personal transformation) are as follows. The verb of the sentence is required to be the V_{Pos}, aaka. This verb must take Rec as an expansion, but is prohibited from taking Time, or the modifier, Neg.

The sentence embedded by the transformation which produces sentences like 132 (this will be labelled the Non-Immediate Condition - Non-Personal transformation) is not as restricted as this.

Its verb too is required to be positive. This verb can, however, be not only the V_{Pos} , aaka, as in 129, but also an Irregular Impersonal verb, as in

141. pala teRkiḻakkaasiya naaṭukaḻukku paṇaṭutaviyum veeRa vakayaana utaviyum veeṇṭiyataay irukkiRatu.
"Many South-East Asian countries are in need of financial and other forms of aid." ,

or indeed any other verb, provided it is followed by either the Jussive or a Potentive Modal, as in

142. vaRumay poruḻaataara puraṭsiyaal maṭṭum aṭakkakkuuṭiyataay irukkiRatu.
"It is only by economic revolution that poverty can be overcome." ,

where the verb is followed by a Potentive Modal. When the verb is the V_{Pos} , aaka, it is required to take Loc as an expansion, but is prohibited from taking either Time or Rec. A separate rule is provided below to accomodate these added restrictions when the verb in the embedded sentence is the V_{Pos} , aaka.

If the embedded sentence in the Non-Immediate Condition transformations is easy to identify, the matrix sentence is a different proposition altogether. The verb of this sentence is clearly the V_{Pos} , iru, and it can generally take any expansion

it is permitted to by the PS rules and the lexicon, with the exception of Rec. The difficulty arises when it comes to deciding what the subject of this verb is. In terms of the criterion of recoverability employed explicitly or implicitly throughout the present work, it appears to be most convenient to choose the Third Person Singular Neuter Pronoun atu "it" from among the various possibilities. This choice is given a certain degree of support by the facts that a) of all the elements that, on the basis of the inflections taken by the verb iru in the sentences under discussion, can be recovered as its subject, the pronoun is, in terms of reference, the most general; and b) the pronoun is already involved in other deletion operations, in which, moreover, all the operative factors indicate that there can be no other choice.

If this decision about the constituency of the matrix sentence in the Non-Immediate Condition transformations is accepted, it will mean that these transformations will in the first instance generate abstract strings such as would underlie ungrammatical sequences like 133 and 134. After the Concord rule has assigned the verb in these strings the Third Person Singular Neuter inflection on the basis of the features of its subject, an obligatory deletion rule (T 80) will delete this subject, giving the grammatical sequences 131 and 132. The solution here adopted is admittedly arbitrary,[7] but it has the all-important virtue of enabling the

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7. In Lees (1963), Lees settles on a similar arbitrary solution to a similar problem, and for similar reasons relating to the utility of the statement. The solution offered here is much influenced by his.

most significant generalizations about the particular aspect of sentence-hood in Tamil under discussion to be simply and effectively made.

In the discussion above, a sentence, 135, was cited with the comment that it illustrates processes similar to those that have taken place in 131. The similarity lies in the fact that 135, too, is a subjectless sentence, which, moreover, has to be derived (like 131) by an embedding transformation which embeds one sentence in a specified Manner Adverbial position in another. The matrix sentence involved in this transformation (which will be labelled the Non-Immediate Condition - Comparative transformation) is identical with the matrix sentence involved in the two transformations discussed above. (The reasons for this are the same as those provided during the discussion of the two Non-Immediate Condition transformations already dealt with.) The sentence embedded by it is, however, different from the sentences embedded by these other transformations in that it does not have to observe the restrictions that these sentences have to. In fact, the only sentences prohibited from being embedded by it are Interrogative and Imperative sentences, and sentences which contain any of the Sentence Expansions introduced by PBR 1. This apart, the Non-Immediate Condition - Comparative transformation has to be distinguished from the other two Non-Immediate Condition transformations on account of the fact that while the latter add the Adverbial Participle after the verb in the sentence embedded by them, it adds the particle <u>poola</u>.

The rules which account for the facts presented above have to be preceded by an obligatory permutation rule which rearranges the constituent elements of strings containing V_{Pos}. At present, these elements are ordered as follows:

143. NP_{sub} ^ Expansion ^ V_{Pos}

If, in such strings, the V_{Pos} is aaka or u], the subject NP is required to immediately precede it. The transformation which transfers this subject NP to its correct position has to precede the first two Non-Immediate Condition rules below for the reason that when they attach the Adverbial Participle to the V_{Pos}, aaka, of the sentence embedded by them, the result is aay/aaka, a form which has to occur bound with the subject NP of this sentence, while maintaining its position in relation to the verb of the matrix, the V_{Pos}, iru. This result, which is illustrated by 131 and 132, cannot be achieved if the elements in the embedded sentence are ordered as in 143.

The obligatory permutation transformation under discussion accounts for the ordering of elements in sentences like 127 and 129. When the V_{Pos} in a string it operates on is iru, this verb is required to take Rec as an expansion.

T 32 Rearrangement of Elements in Strings Containing V_{Pos}

$W - NP_{sub} - X - V_{Pos} - Z \Rightarrow$

$$W - X - NP_{sub} - V_{Pos} - Z$$

where $X \subset Rec$ if V_{Pos} / <u>iru</u>

Rec does not belong to an embedded sentence.

T 33 <u>Adverb of Manner: Non-Immediate Condition - Personal</u>

$$W - NP_{1subl} - X - A \hat{} \underline{NP_2 \hat{} dat.c}_{Rec} \hat{} NP_{3sub2} \hat{} V_{Posl} -$$

$$Y - V_{Pos2} - Z \Rightarrow$$

$$W - NP_{1subl} - X - A \hat{} \underline{NP_2 \hat{} dat.c}_{Rec} \hat{} NP_3 \hat{} V_{Posl} \hat{}$$

$$Adv.Part. - Y - V_{Pos2} - Z$$

where $A \ldots V_{Posl}$ / NIC Perso

NP_1 / [+ Pron, + Thd P, + Sg, - Anim]

V_{Posl} / <u>aaka</u>

V_{Pos2} / <u>iru</u>

$A \not\subset$ Time

$\left\{\begin{matrix} W \\ X \\ Y \end{matrix}\right\} \not\subset$ Rec

T 34 Adverb of Manner: Non-Immediate Condition - Non-Personal

T 34.1

$$W - NP_{1subj1} - X - A \hat{} \underline{\quad NP_2 \quad}_{Loc} \hat{} B \hat{} NP_{3sub2} \hat{} V_{Pos1} -$$

$$Y - V_{Pos2} - Z \Rightarrow$$

$$W - NP_{1subj1} - X - A \hat{} \underline{\quad NP_2 \quad}_{Loc} \hat{} B \hat{} NP_3 \hat{} V_{Pos1} \hat{} Adv.Part. -$$

$$Y - V_{Pos2} - Z$$

where $A \ldots V_{Pos1}$ / NIC Non-Perso

NP_1 / [+ Pron, + Thd P, + Sg, - Anim]

V_{Pos1} / aaka

V_{Pos2} / iru

$A \not\in \begin{Bmatrix} Time \\ Rec \end{Bmatrix}$

$\begin{Bmatrix} W \\ X \\ Y \end{Bmatrix} \not\in$ Rec

T 34.2

$$W - NP_{1sub} - X - A \hat{} \begin{bmatrix} VB \\ Modal \end{bmatrix} \hat{} B - Y - V_{Pos} - Z \Rightarrow$$

$$W - NP_{1sub} - X - A \hat{} \begin{bmatrix} VB \\ Modal \end{bmatrix} \hat{} B \hat{} \text{Adv.Part.} - Y - V_{Pos} - Z$$

where A...B / NIC Non-Perso

NP_1 / [+ Pron, + Thd P, + Sg, - Anim]

VB / Irregular Impersonal Verb

V_{Pos} / iru

A $\not\subset$ Time

B $\not\subset$ Neg

$\begin{Bmatrix} W \\ X \\ Y \end{Bmatrix}$ $\not\subset$ Rec

T 35 Adverb of Manner: Non-Immediate Condition - Comparative

$$W - NP_{1subl} - X - A \hat{} NP_{2sub2} \hat{} \text{Predicative P} - Y - V_{Pos} - Z \Rightarrow$$

$$W - NP_{1subl} - X - A \hat{} NP_{2sub2} \hat{} \text{Predicative P} \hat{} \text{poola} - Y - V_{Pos} - Z$$

where A...Predicative / NIC Comp

NP_1 / [+ Pron, + Thd P, + Sg, - Anim]

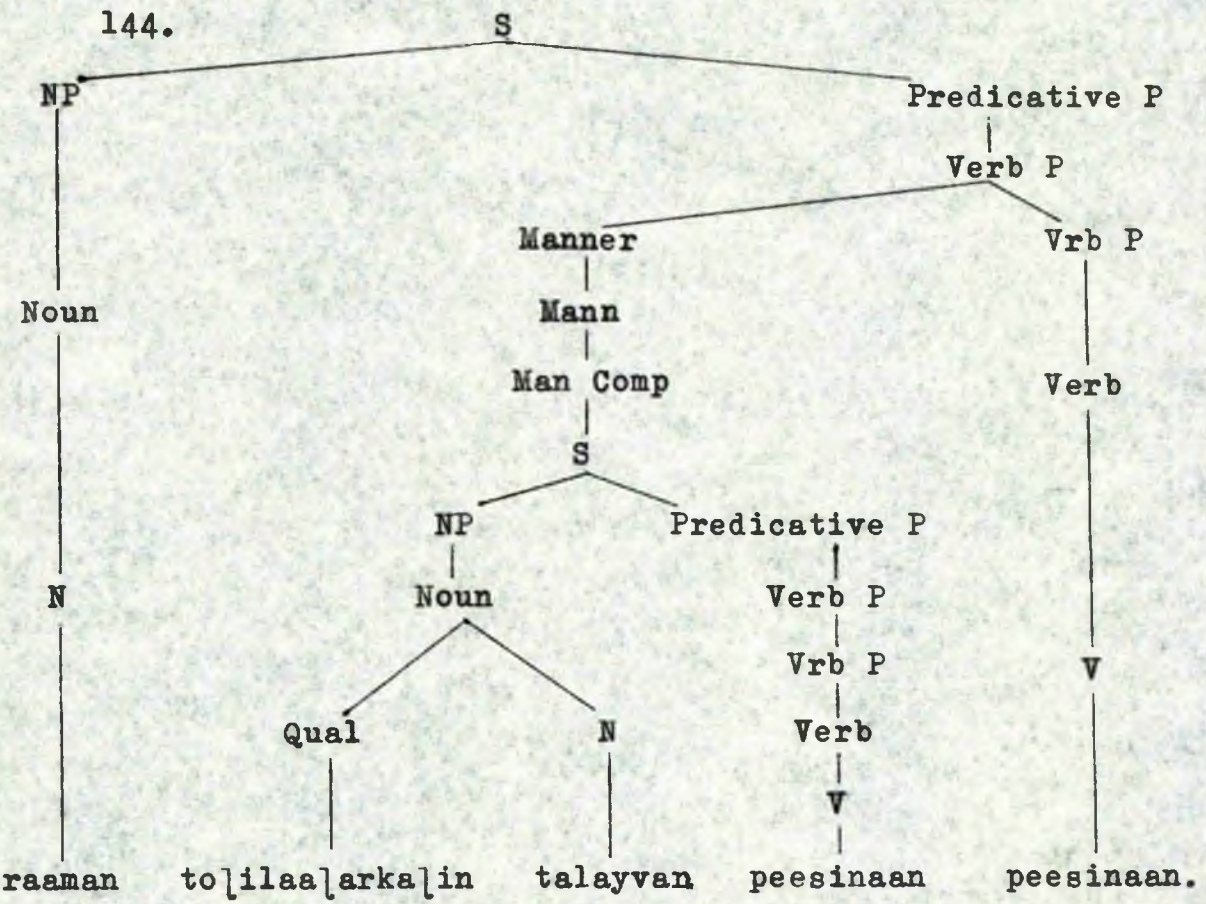
$$V_{Pos} \quad / \quad \underline{iru}$$

$$\left\{\begin{matrix} W \\ X \\ Y \end{matrix}\right\} \quad \not\in \quad Rec$$

$$A \quad \not\in \quad \left\{\begin{matrix} Imp \\ Q \\ SE_1 \end{matrix}\right\}$$

The kind of derivational tree that can be constructed for sentences derived by means of the Manner Adverbialization rules is illustrated by the simplified tree below, which would be associated with the sentence 120, produced by T 28.

144.



There is one set of details pertaining to strings produced by T 34.2 which, though they may be dealt with at a later stage, are treated here for ease of exposition. Where the element preceding the Adverbial Participle in such strings is either the Irregular Impersonal verb, veeṇṭum, as in 141, or the Jussive Modal, as in

145. vaara tiṅkaRkiḻamay kantanukku oru aaraayssippattirattay vaasikka veeṇṭiyataay irukkiRatu.
"Kandan has to read a research paper next Monday." ,

the Adverbial Participle may optionally be deleted. When this happens, the Irregular Impersonal verb or the Jussive Modal, whichever the case may be, assumes the simple participial form. Thus 141 has the alternative form,

146. pala teRkiḻakkaasiya naaṭukaḻukku paṇautaviyum veeRa vakayaana utaviyum veeṇṭi irukkinRana. ,

and 145, the alternative form,

147. vaara tiṅkaRkiḻamay kantanukku oru aaraayssippattirattay vaasikka veeṇṭi irukkiRatu.

When the sentence which undergoes the changes described has the Irregular Impersonal verb, its Object NP is converted into the subject of the transform. The later Concord rule (T 71) will put the verb iru in number, gender and person concord with the new subject. Since, however, the old Third Person Neuter Singular Pronoun subject brought over from the matrix sentence in T 34.2

still remains, it will have to be deleted before the string goes to the Concord rule. T 36 below, while deleting the Adverbial Participle, will attend to this detail too.

T 36 (Optional) Deletion of Adverbial Participle

T 36.1

$$W - NP_{1sub} - X - \underline{NP_2 \hat{} \text{acc.c}}_{obj} - Y - \underline{veentum} -$$

$$\text{Adv.Part.} - Z \Rightarrow$$

$$W - X - NP_{2sub} - Y - \underline{veentum} - \text{Part.} - Z$$

where $\underline{veentum} \; / \; V_{Imp}$

T 36.2

$$W - VB - (Asp) - \text{Jussive} - \text{Adv.Part.} - Z \Rightarrow$$

$$W - VB - (Asp) - \text{Jussive} - \text{Part.} - Z$$

The next group of embedding transformations to be dealt with are the Nominalizations. The first of them, the General Nominalization transformation, operates partly on terminal strings containing the node Gen Nom, and partly on strings sent to it by various of the Adverbialization transformations above, viz. Ts 14,

17.1, 19, 24, 25 (through 26) and 28. Details about the latter have already been provided, and here it is necessary to recall just two general points. The first is that the sentences sent on to the General Nominalization transformation by the first two of the Adverbialization transformations listed are not in fact those that have already passed through them, but those that, while qualifying to do so, opted not to pass through them. When, therefore, the General Nominalization transformation operates on these strings, it both embeds sentences in specified positions and nominalizes them. The second point is that in the case of strings sent to it by all the other Adverbialization transformations listed, the General Nominalization transformation simply nominalizes the sentence whose embedding has already been accomplished.

The operations carried out by the General Nominalization transformation on terminal strings containing the node Gen Nom are illustrated by

148. aaraayssittuRay vivasaakikaḷ aati vivasaaka muRaykaḷay upayookikkiRatay kaṇṭikkiRatu.
"The Research Department condemns the use of primitive methods of agriculture by the farmers." ,

which is formed by embedding

149. vivasaakikaḷ aati vivasaaka muRaykaḷay upayookikkiRaarkaḷ.
"The farmers use primitive methods of agriculture."

in Object position in

150. aaraayssittuRay Object kaɳṭikkiRatu.

"The Research Department condemns ____."

The transformation nominalizes 149 while embedding it. The major restriction on the transformation in such cases is that the verb in the sentence embedded by it must inflect for tense. Indeed, the only instance when the transformation operates on a sentence which does not satisfy this condition is when it nominalizes a sentence which has already been embedded by T 28.

The process of nominalization that the transformation carries out consists in the addition, immediately after the tense marker (where it carries one) of the verb in the embedded sentence, of a nominalizing suffix which has the shape of the Third Person Singular Neuter pronoun, atu. When the sentence nominalized has been embedded by T 28, if its verb does not inflect for tense, the suffix is added to the last verbal element in the group.

T 37 General Nominalization

$$W - NP \hat{} X \hat{} VB \hat{} Modif - (P) - Z \Rightarrow$$

$$W - NP \hat{} X \hat{} VB \hat{} Modif \hat{} [+ Pron, + Thd P, + Neut, + Sg] - (P) - Z$$

where NP...Modif / { [S embedded by AD.T / S which qualified to be embedded by T 14 or T 17.1 but opted not to be so embedded] where P is chosen ; Gen Nom }

AD.T / { T 19 ; T 24 ; T 25 ; T 28 }

P / { aal where AD.T / T 25 ; ooṭu, uṭan, um, aaka, poruṭṭu, nimittam, poola, mun, pin, or piRaku }

Modif / { (A) (Tense) (B) where P / poola ; (A) Tense (B) }

The Factive Object transformation embeds a sentence whose main verb is the Quotative Verb in Object position in a matrix sentence. This, as well as the two transformations that follow, are strictly not nominalizations, but it is convenient to treat them as such because they are developed from the node, Object, which is usually realized by a nominal. A sentence illustrating the transformation is

151. yaattiri taan tiikkuḻippay kaṇṭaan enRu sonnaan.
"The pilgrim said that he had seen the fire-walking ceremony." ,

formed by embedding

152. yaattiri taan tiikkuḻippay kaṇṭaan enRaan. ,

which translates as 151 does, in Object position in

153. yaattiri Object sonnaan.

"The pilgrim said ____."

(151 incorporates certain changes effected by a Reflexivization rule on the string actually produced by the Factive Object transformation, but these are of no significance at this point.) One of the conditions on the Factive Object transformation, that the verb in the sentence embedded by it must be the Quotative Verb, has already been mentioned. This apart, the transformation has to observe the following conditions. The subject of the embedded sentence must be identical with the subject of the matrix. The verb in the embedded sentence may not take Neg or Passive as a modifier. Any other expansion this verb may take, with the exception of its Object Quotation, must be identical with an expansion taken by the verb in the matrix. If the source sentences meet these conditions, the transformation deletes the subject and all the expansions taken by the verb in the embedded sentence other than the Quotation, and converts the Quotative Verb into its past participial form. The rule below will introduce the participle, but leave it to a Tense Adjustment rule (T 97) to carry out the change in the tense marker.

T 38 Factive Object

$$W - NP_{1subl} - X - (A)\hat{} NP_{2sub2} \hat{} (B)\hat{} Quotat \hat{} VB_2 \hat{} Tense - VB_1 - Z \Rightarrow$$

$$W - NP_{1subl} - X - Quotat \hat{} VB_2 \hat{} Tense \hat{} Part. - VB_1 - Z$$

where A...Tense / Fact Obj

$NP_1 = NP_2$

A = W

B = X

The transformation just dealt with raises certain important problems. One of them relates to the exponency of Quotat in strings produced by it. Quotat is one class which cannot be delimited. In strings produced by T 38, however, it is necessary to indicate that when the verb in the matrix is keel "ask", Quotat must be a question, and that when it is the compound kaṯṯalayiṯu "order", it must be a command. In most other cases, Quotat is required to be a statement sentence. The verb, sol "say", is an exception, in that it can occur with any element covered by Quotat. This problem has been dealt with by the lexicon, which indicated

not only which verbs take the Factive Object, but also the exponency of Quotat in each case.

The second problem relating to strings produced by T 38 concerns the distinction between direct and indirect speech. Tamil does not appear to draw any consistent formal line of demarcation between these two kinds of speech. As a result, a sentence like

154. kantan nii uṇmayay piRaku terintukoḷvaay enRu sonnaan. ,

which has been derived by means of T 38, can be assigned either of the readings,

155. "Kandan said, 'You will get to know the truth later.' "

and

156. "Kandan said that you will get to know the truth later."

A final point relating to sentences produced by T 38 is that the Quotative Verb in them generally relinquishes its usual meaning "say" and assumes a factive function, asserting a datum or a fact. This is to some extent indicated by the absence of an equivalent for the Quotative Verb in the translations of these sentences. Underlining the factive nature of these sentences are certain observations which may be made when they are subjected to the Q_E Question transformations (Ts 53 to 59). When Q_E attaches itself to the designated representative of an element within Quotat, the result is not a question, as it would be in other cases, but a

factive statement. Thus when Q_E is attached to the designated representative of the class realized as tiikkuḷippay in 151, the result is the statement,

157. yaattiri taan ennatayk kaṇṭaan enRu sonnaan.
"The pilgrim told (us) what he had seen."

It might be pointed out before passing on that there are other contexts too in which the Quotative Verb assumes this kind of factive function. Among these are passivized sentences and sentences that have been nominalized by the General Nominalization transformation (T 37).

The next Nominalization transformation embeds one sentence in $S_{In\ Gen}$ position in another. The major condition that this transformation is required to observe is that the subject NP of the embedded sentence must be identical with a specified NP in the matrix. The operative NP in the matrix may be one of two depending on whether its verb takes Rec as an expansion or not. Where it does take Rec as an expansion, the subject NP of the embedded sentence is required to be identical with the head NP of this Rec. Thus

158. tampi tooṇiyay seluttinaan.
"The younger brother sailed the boat."

may be embedded in $S_{In\ Gen}$ position in

159. miinpiṭippavan tampikku $S_{\underline{In\ Gen}}$ kaRpittaan.

"The fisherman taught the younger brother ____."

to give

160. miinpiṭippavan tampikku tooṇiyay seluttak kaRpittaan.

"The fisherman taught his younger brother to sail the boat."

Where, on the other hand, the verb in the matrix sentence does not take Rec as an expansion, the subject NP of the embedded sentence is required to be identical with the subject NP of the matrix. So,

161. kantan saṭṭam paṭittaan.

"Kandan studied law."

may be embedded by the transformation in $S_{\underline{In\ Gen}}$ position in

162. kantan $S_{\underline{In\ Gen}}$ tiirmaanittaan.

"Kandan decided ____." ,

because its subject noun is identical with the latter's, to give

163. kantan saṭṭam paṭikkat tiirmaanittaan.

"Kandan decided to study law."

The embedding can take place even when the subject NP inflects for the dative case, as it does in Irregular Impersonal sentences.

The following are the other conditions that the transformation is required to observe. The embedded sentence may not belong to the Irregular Impersonal pattern. Its verb, which may not be a $V_{\underline{Cop\ Iden}}$, either of the $V_{\underline{Pos}}$ verbs, aaka or ul, or the Quotative Verb, is prohibited from taking Neg or a Modal as a modifier. The sentence may not be imperative. The transformation deletes the subject NP of the embedded sentence and converts its verb into the infinitive. The latter operation has the effect of erasing any tense markers that this verb may have taken on being embedded.

T 39 $S_{\underline{In}}$: General

T 39.1

$$A - NP_{1subl} - B - \underbrace{NP_3 \hat{}\ dat.c}_{Rec} - C - NP_{2sub2} \hat{}\ Y \hat{}\ VB_2 \hat{}$$

$$Z \hat{}\ Tense - D - VB_1 - E \Rightarrow$$

$$A - NP_{1subl} - B - \underbrace{NP_3 \hat{}\ dat.c}_{Rec} - C - Y \hat{}\ VB_2 \hat{}\ Z \hat{}$$

$$Inf. - D - VB_1 - E$$

where $NP_2 \ldots Tense \ / \ S_{In\ Gen}$

$$NP_2 = NP_3$$

$$Z \not\in \begin{Bmatrix} Modal \\ Neg \end{Bmatrix}$$

T 39.2

$$A - NP_{1subl} - B - NP_{2sub2} \hat{} Y \hat{} VB_2 \hat{} Z \hat{} Tense - C - VB_1 - D \Rightarrow$$

$$A - NP_{1subl} - B - Y \hat{} VB_2 \hat{} Z \hat{} Inf. - C - VB_1 - D$$

where $NP_2 \ldots Tense \;/\; S_{In\ Gen}$

$NP_1 = NP_2$

$B \not\in Rec$

$Z \not\in \left\{\begin{matrix} Modal \\ Neg \end{matrix}\right\}$

T 40 differs from T 39 primarily on account of the fact that all sentences embedded by it are required to be imperative. In view of this condition, it is not surprising that only one or two verbs can select $S_{In\ Imp}$ in Object position. An example of a sentence produced by T 40 is

164. kaɳkaaɳippavan toḷilaaḷukku peṯṯiyay tuukkas sonnaan.
"The overseer told the labourer to lift the box." ,

which is derived by embedding the imperative sentence

165. (nii) peṭṭiyay tuukku(vaay).

"(You) lift the box."

in $S_{\underline{In\ Imp}}$ position in

166. kaɳkaaɳippavan toḷilaaḷukku $S_{\underline{In\ Imp}}$ sonnaan.

"The overseer told the labourer ____."

The transformation changes the verbal complex in the embedded sentence in one of two alternative ways. It either converts the last verbal element in this complex into the infinitive, or adds a suffix -um followed by a particle paṭi to it. In both cases, the Future tense markers that the verbs in the embedded Imperative sentences will be carrying will be deleted. 164 has chosen the first of these two alternatives. If the second had been chosen instead, the result would have been

167. kaɳkaaɳippavan toḷilaaḷikku peṭṭiyay tuukkumpaṭi sonnaan.

The transformation also deletes the Second Person subject of the embedded sentence.

Among the conditions on the embedded sentence in the transformation is one which prohibits it from being negative. The fact that it is imperative also imposes various restrictions on its constituents, but since these details have already been worked out in the PS rules it is not necessary to specify them here.

T 40 S_{In} : Imperative

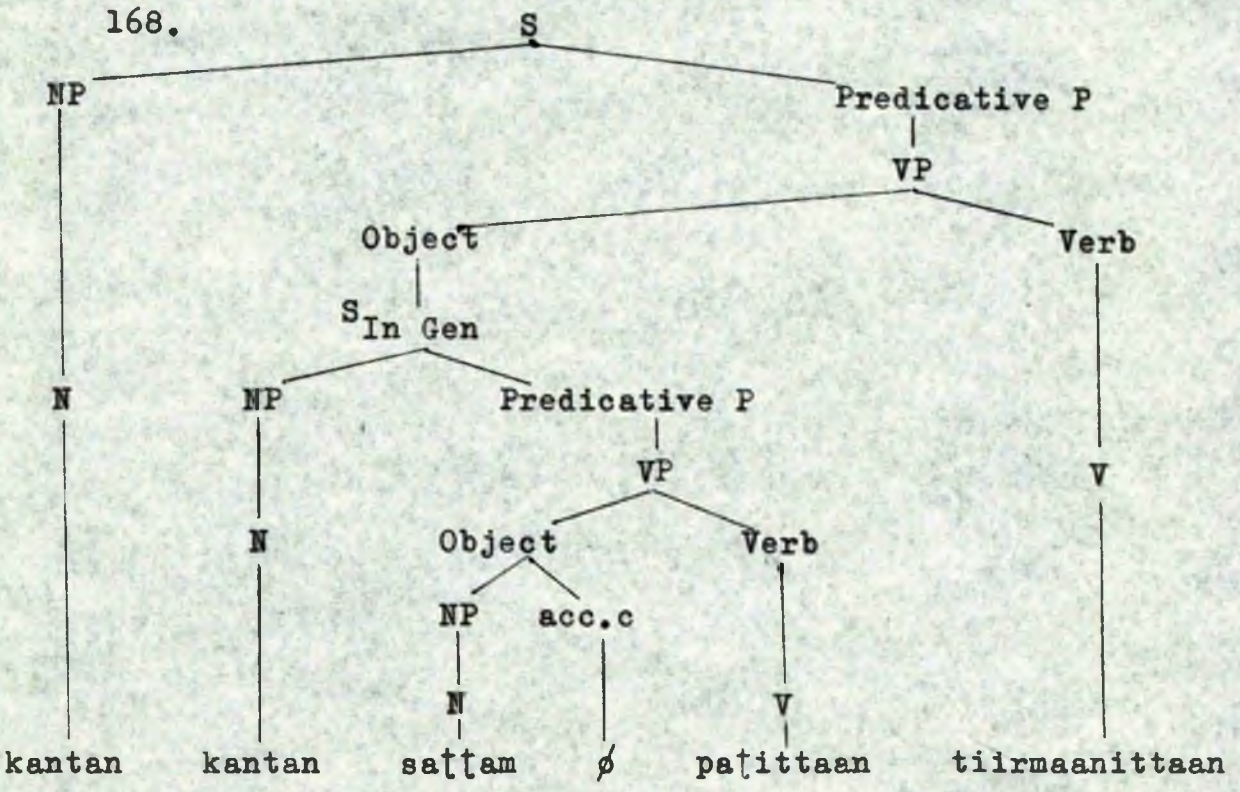
$$W - NP_{1subl} - X - Imp \hat{} NP_{2sub2} \hat{} A \hat{} VB_2 \hat{} B \hat{} Fut - Y - VB_1 - Z \Rightarrow$$

$$W - NP_{1subl} - X - A \hat{} VB_2 \hat{} B \left\{ \begin{matrix} Inf. \\ \underline{-um} \end{matrix} \hat{} \underline{pati} \right\} - Y - VB_1 - Z$$

where Imp...Fut / $S_{In\ Imp}$

The kind of derivational tree that would be constructed for strings produced by the Nominalization transformations is illustrated by the following simplified tree, which would be associated with 163.

168.



Among the Adjectivalization transformations, which will be dealt with next, is one which embeds a sentence in S Qualifier position before a nominal or a noun-like Adverbial. Four major rules are required to formalize the operations carried out by this transformation. The following triples of sentences illustrate some of the processes accounted for by the most general of these rules. In each case, a) is embedded in Q position in b) to produce c).

169. a) kaṭaḷaykkaaran marattaṭiyil irukkiRaan.
"The gram seller is sitting at the foot of the tree."

b) Q kaṭaḷaykkaaran mika rusiyaana kaṭaḷay viRkiRaan.
"The gram seller sells very tasty gram."

c) marattaṭiyil irukkiRa kaṭaḷaykkaaran mika rusiyaana kaṭaḷay viRkiRaan.
"The gram seller who is sitting at the foot of the tree sells very tasty gram."

170. a) visaaka viḻaa kaalattil makkaḷ pala iṭaŋkaḷil aḷakaana pantaŋkaḷ kaṭṭukiRaarkaḷ.
"During the time of the Wesak festival, people construct beautiful pandals in many places."

b) pala aayirakkaŋakkaanavarkaḷ Q aḷakaana pantaŋkaḷay paarkkap pookiRaarkaḷ.
"Many thousands go to see the beautiful pandals."

c) pala aayirakkaŋakkaanavarkaḷ visaaka viḻaa kaalattil

makkaḷ pala iṯaŋkaḷil kaṯṯukiRa aḷakaana pantaŋkaḷay paarkkap pookiRaarkaḷ.

"Many thousands go to see the beautiful pandals constructed by people in many places during the time of the Wesak festival."

These sentences demonstrate that a pre-requisite on the operation of the Adjectivalization rule being discussed is the identity of a noun or pronoun in the matrix sentence with a noun or pronoun in the embedded sentence. (In each case above, the operative noun or pronoun has been underlined.) 170 further demonstrates that the nouns or pronouns involved may take their own qualifiers, but that then, allowing for certain differences, the identity condition extends to cover these too. That is to say, the whole noun or pronoun group in the embedded sentence is generally required to be identical with the whole noun or pronoun group qualified in the matrix sentence, with only two permitted differences. The first of these is that the nominal in the embedded sentence cannot carry a S Qualifier, while, of course, the nominal in the matrix must carry one, which will be the embedded sentence itself. The second of the differences permitted is that these nominals may inflect for different cases in the two sentences. In the discussion below, the noun or pronoun groups whose identity enables the transformation to

take place will be labelled NO.

In 169 and 170, NO was always either in subject or in object position. No restriction is, however, implied thereby, for in the matrix sentence, virtually any nominal, whichever node it is developed from in the PS rules, may take an embedded sentence as a qualifier, provided the identity condition is met. The following sentences confirm the claim just made by showing the qualified nominal in a random selection of functions. In each case, this nominal will be underlined, and its function in the matrix sentence indicated.

171. vaɳṭikkaaran kiriiʃʃenRu olikkiRa sillukku koḷuppu poottaan. (Rec)
"The carter applied grease on the creaking wheel."

172. keeṭṭiruntavarkaḷ ravi ʃaŋkar vaasitta mika iniya raakattil mayaŋkinaarkaḷ. (Cont)
"The listeners were enraptured by the exquisite melody played by Ravi Shankar."

173. vaɳɳaan aaRRaŋkarayil irunta peruɳ kallonRil uṭuppukaḷay aṭittaan. (Loc)
"The dhoby beat the clothes on a great rock which was on the river bank."

The nominals in the sentence embedded by the transformation under discussion are, however, somewhat restricted in this respect, for not every one of them can function as NO. That is

to say, not every nominal in a sentence can provide the conditions under which the sentence in which it occurs may be embedded as a qualifier of a nominal in another sentence, even if it happens to be identical with that other nominal. The restrictions relate mainly to the transformational history of the nominal concerned, or to the position it occupies in the sentence. The transformations involved in this matter are the Passive, the Direct Causal and various of the embedding transformations. A sentence produced by the Passive transformation may contain a nominal that is identical with a nominal in another sentence. It may, however, be embedded as a qualifier of that other nominal only if in it the nominal concerned is in subject position. Thus

174. vaɳṭi iraɳṭu maaṭukaḷaal iḻukkappaṭṭatu.
"The cart was drawn by two bulls."

may be embedded in Q position in

175. Q vaɳṭiyil siini muuṭṭaykaḷ nirampiyiruntana.
"The cart was full of bags of sugar." ,

because it is its subject nominal that is identical with the qualified nominal, to give

176. iraɳṭu maaṭukaḷaal iḻukkappaṭṭa vaɳṭiyil siini muuṭṭaykaḷ nirampiyiruntana.
"The cart, which was drawn by two bulls, was full of bags of sugar."

It may not, on the other hand, be embedded in Q position in

177. vaɳṭikkaaranin kuukkuralay keeṭṭu Q iraɳṭu maaṭukaḷ ooṭat toṭaŋkina.
"Hearing the shouts of the carter, the two bulls began to run."

although its agentive nominal is identical with the nominal following Q in this sentence. The restriction is clearly one that the Passive transformation is responsible for, since, on the basis of the identity of the same nominals, the active sentence corresponding to 174,

178. iraɳṭu maaṭukaḷ vaɳṭiyay iḷuttana.
"Two bulls drew the cart."

(the agentive nominal of 174 is in its original subject position here), may be embedded in Q position in 177, to give

179. vaɳṭikkaaranin kuukkuralay keeṭṭu vaɳṭiyay iḷutta iraɳṭu maaṭukaḷ ooṭat toṭaŋkina.
"Hearing the shouts of the carter, the two bulls which drew the cart began to run."

The same restriction applies to nominals which belong to sentences produced by the Direct Causal transformation. So, the causal sentence

180. putu teesiya uṉarssi makkaḷay taṉkaḷuṭaya paṉpaaṭṭay uyarvaaka matikkas seykiRatu.
"The new national sentiment makes the people respect their traditions highly."

may be embedded in Q position in

181. aaṉkila muRaykaḷayt taḷuviya mattiya vakuppinarkaḷ palar Q putu teesiya uṉarssiyay taṭay seytaarkaḷ.
"Many of the anglicised middle class resisted the new national sentiment."

to give

182. aaṉkila muRaykaḷayt taḷuviya mattiya vakuppinarkaḷ palar makkaḷay taṉkaḷuṭaya paṉpaaṭṭay uyarvaaka matikkas seyki-Ra putu teesiya uṉarssiyay taṭay seytaarkaḷ.
"Many of the anglicised middle class resisted the new national sentiment which makes the people respect their traditions highly." ,

because it is its subject nominal that is identical with the nominal qualified. It may not, however, be embedded in either of the Q positions in

183. anniyar aaṭsi kaalattil Q makkaḷ Q taṉkaḷuṭaya paṉpaaṭṭay puRakkaṉittaarkaḷ.
"During the period of foreign rule, the people slighted their traditions." ,

because, though it contains nominals identical with the nominals following Q in this sentence, it does not have them in subject position.

The third set of transformations referred to above as being relevant to the restrictions on NO in the embedded sentence consists of various of the embedding transformations. The operative nominal in the sentence to be embedded by the rule under discussion cannot generally belong to, or be, an element which itself has been embedded in this sentence. The only instance when this restriction doea not apply is when the nominal concerned belongs to a sentence embedded by either of the S_{In} transformations (Ts 39 and 40). Thus

184. aasiriyar maaɳavarukku ap puttakattay vaasikkas sonnaan.
"The teacher told the student to read that book."

may be embedded in Q position in

185. Q ap puttakam kaʃtamaay iruntatu.
"That book was difficult."

to give

186. aasiriyar maaɳavarukku vaasikkas sonna puttakam kaʃtamaay iruntatu.
"The book that the teacher told the student to read was difficult." ,

even though the NO in it belongs to an embedded sentence, because this embedding has been accomplished by T 40.

In all instances other than this, a nominal which is identical with a nominal in another sentence cannot, despite this identity, enable the sentence in which it occurs to be embedded as a qualifier of that other nominal, if it itself belongs to, or is, an already embedded sentence. This condition prevents NO in the embedded sentence from being developed from the Comm, Purpose, Qual, Perspec and Manner Adverbial nodes. Illustrations will be provided for only one of these. In

187. raaman periyavanaaka naṭantukoṇṭaan.

"Rama behaved like a great man." ,

the underlined nominal is identical with the object nominal in

188. elloorum periyavanay matittaarkaḷ.

"Everyone respected the great man."

Since, however, it is in Manner Adverbial function, it does not permit 187 to be embedded as a qualifier of the object in 188.

The restrictions discussed so far all relate to nominals with a transformational history. These apart, a nominal which is followed by a postfix cannot, even if it happens to be identical with nominals in other sentences, provide the conditions for the embedding of the sentence in which it occurs as a qualifier of those other nominals, except in one case which will be discussed later. Thus

189. sanniyaasi suuṭaana kariyin meel naṭantaan.

"The Sanniyaasi walked on the hot coals."

may not be embedded in Q position in

190. Q suuṭaana kari tiikuḷippukkaararkaḷin uṭuppukaḷay suṭṭatu.

"The hot coals singed the clothes of the fire-walkers." ,

because, although the underlined nominals are identical in the two sentences, in the former it is followed by the postfix meel "on". In this instance, the noun kari takes also the inflection -in. This inflection is, however, the automatic consequence of the attachment of the postfix to the noun. Where such automatic inflections are taken by the nominals, the deciding factor, as far as the operation of the rule under discussion is concerned, is the postfix.

The Substit postfix aaka calls for a special comment with regard to this point. As demonstrated by

191. kantan parisukkaaka paṭittaan.

"Kandan studied for the prize." ,

this postfix requires the nominal it is attached to to be assigned a dative case marker, a fact which will be attended to by a Case Assignment rule (T 62). After the assignment of the case marker, however, it may be optionally deleted (see T 83), so that an alternative form of 191 is

192. kantan parisukku paṭittaan.

In terms of the condition set out above, 191 is prohibited from embedding in Q position in, for example, a sentence like

193. Q parisu peRuvatu pukaḻ aḻikkum viʃayamaaka iruntatu.
"To win the prize was a great honour." ,

although the nominal to be qualified in this sentence is identical with the nominal preceding the postfix in 191. On the other hand, 192, which is derived from 191, does not appear to suffer from the same disabilities as 191 with regard to this matter. In fact, however, it will be found that it too cannot be embedded in Q position in 193. The rules below will provide for the indication of this fact by ordering the deletion rule referred to after the Adjectivalization rule under discussion. Such an ordering will make available at the time of the Adjectivalization rule abstract strings of the form underlying 191 but not 192. These strings will be prohibited from embedding in Q position in strings of the kind underlying 193, and when, later, strings of the kind underlying 192 are derived from them, the same restriction will perforce apply to them too.

A final set of restrictions on the operation of the Adjectivalization rule under discussion relates to the verb in the embedded sentence, or to the modifiers taken by this verb. To deal with the latter first, the verb in the sentence embedded by the Adjectivalization rule is prohibited from taking any Modal other than the

Poten and the Jussive Modals. Where it chooses a Poten Modal, one of the restrictions stated above, that a nominal followed by a postfix cannot function as NO in the sentence to be embedded, must be relaxed somewhat. This is necessary because in sentences in which the verb has chosen a Poten Modal, the postfix -aal, which T 3 assigns to the subject nominal, does not prevent this nominal from functioning as NO. Thus

194. en naNpanaal pala moLikaL peesa iyalum.

"My friend can speak many languages."

may be embedded in Q position in

195. arasaaNkam Q en naNpanay mukkiya raajatantira pataviyonRukku niyamittatu.

"The Government appointed my friend to a top diplomatic post."

even though its NO is followed by the agentive postfix -aal, to give

196. arasaaNkam pala moLikaL peesa iyanRa en naNpanay mukkiya raajatantira pataviyonRukku niyamittatu.

"The Government appointed my friend, who could speak many languages, to a top diplomatic post."

When the sentence to be embedded contains an Irregular Impersonal verb, the NO in it is required always to be its Object. Thus

197. as seyti ellaarukkum teriyum.

"Everyone knows that bit of news."

may be embedded in Q position in

198. murukan Q as seytiyay maRakka muyanRaan.
"Murukan tried to hide that bit of news."

to give

199. murukan ellaarukkum terinta as seytiyay maRakka muyanRaan.
"Murukan tried to hide the bit of news that everyone knew."

only because it is its Object NP that is identical with the NP qualified.

If the sentence to be embedded contains $V_{\text{Cop Act}}$ as its main verb, NO in it is required to be the subject nominal. Thus

200. en naɳpan taʈukkappaʈʈa iyakkattin talayvan aanaan.
"My friend became the leader of the banned movement."

may be embedded in Q position in

201. arasaaŋkam Q en naɳpanay siRayil pooʈʈatu.
"The Government imprisoned my friend."

to give

202. arasaaŋkam taʈukkappaʈʈa iyakkattin talayvanaana en naɳpanay siRayil pooʈʈatu.
"The Government imprisoned my friend, who became the leader of the banned movement."

only because it satisfies this condition.

The rule under discussion will also indicate that the

main verb of the sentence to be embedded by it cannot be either the $V_{\underline{Cop\ Iden}}$ or a $V_{\underline{Pos}}$. The reasons for this will become clear during the discussion of some of the later Adjectivalization rules, and of the Possessive transformation (T 48).

Sentences which contain the Quotative Verb raise various problems when they are embedded by the Adjectivalization transformation. Certain of these will be dealt with by the rule to be discussed next. The rule at present under discussion will indicate two major points regarding the embedding of sentences containing the Quotative Verb. The first is that if the Quotative Verb is not the main verb of these sentences, it should belong to a sentence which has previously been embedded in them by the Factive Object transformation (T 38). The second relates to the elements that can function as NO in these sentences. If the Quotative sentence has not already been embedded by T 38, it is only its subject NP that can function as NO. If, on the other hand, it has already been so embedded, any nominal in the string that has resulted may function as NO, provided a) it does not belong to the Quotat taken by the Quotative Verb, and b) it observes the various other conditions discussed above.

The kind of sentence whose derivation was considered in the previous paragraph is illustrated by

203. vayttiyan payttiyakkaaran enRu sonna manitan kattinaan.
"The man who said the doctor was mad shouted."

which is derived by embedding

204. manitan vayttiyan payttiyakkaaran (aavaan) enRu sonnaan.

"The man said that the doctor was mad." ,

which contains an embedded Quotative sentence, in Q position in

205. Q manitan kattinaan.

"The man shouted."

(It will be observed that the $V_{Cop\ Iden}$, aavaan, of the Quotat in 204 has been deleted in 203. This is not accomplished by the Adjectivalization transformation but by a later Deletion transformation (T 96).) 203 happens to be an ambiguous sentence, for it could be assigned the reading

206. "The man the doctor said was mad shouted."

instead of the one it has been assigned above. This point will be returned to during the discussion of the next rule.

All nominals not specifically excluded by the restrictions set out above may, regardless of the node they are developed from, assume the function of NO in the sentence to be embedded by the Adjectivalization transformation under discussion. To illustrate, in the first of the following triples of sentences NO in the embedded sentence is developed from Rec, while in the second it is developed from Loc. In each case, NO is underlined.

207. a) kantan maaṇavarukku paṭippittaar.

"Kandan taught the student."

b) Ø maaṇavar palkalaykkaḷakattays seerntaar.

"The student entered the University."

c) kantan paṭippitta maaṇavar palkalaykkaḷakattays seerntaar.

"The student Kandan taught entered the University."

208. a) kantan kiraamattil piRantaan.

"Kandan was born in a village."

b) Ø kiraamam mika aḻakaay iruntatu.

"The village was very beautiful."

c) kantan piRanta kiraamam mika aḻakaay iruntatu.

"The village Kandan was born in was very beautiful."

While, as these sentences (among others) show, a variety of nominals may function as NO in the sentence embedded by the Adjectivalization rule under discussion, certain of the sentences produced by this rule raise a problem that appears to be particularly associated with the NO in the embedded sentence. The illustrations provided above show that the rule makes two major changes in the string it embeds: it converts the last verbal element of this string into its conjunctival participial form, and deletes its NO, together with any case ending it may take. This latter change appears to result inevitably in the generation of many awkward sentences, and indeed in some cases the awkwardness is so great that the sentences verge, in the native's intuition, on the ungrammatical. Such a sentence is

209. siRumi irakasiyattays sonna vi⌊ayaat⌈uttoo⌊i atay ellorukkum terivittaa⌊.

"The playmate to whom the little girl told the secret announced it to everyone." ,

which is derived by embedding

210. siRumi irakasiyattay vi⌊ayaat⌈uttoo⌊ikkus sonnaa⌊.

"The little girl told her playmate the secret."

in Q position in

211. Q vi⌊ayaat⌈uttoo⌊i atay elloorukkum terivittaa⌊.

"The playmate announced it to everyone."

The most plausible explanation of the extreme awkwardness of 209 is that with the deletion of the dative case inflection taken by NO in the embedded sentence (and it must be remembered that case inflections in Tamil are often the chief index to the structural function within a sentence of a nominal they may be attached to), the sentence has become uninterpretable. This might lead to the conclusion that sentences like 209 are not in fact merely awkward, but ungrammatical, the ungrammaticality being explained in terms of a structural condition on the Adjectivalization rule under discussion which prevents it from embedding one sentence in Q position in another if the deletion of a deep structural case inflection were involved. There is good reason, however, to accept 209 as being grammatical. The proof of its grammaticality is provided by the following considerations. In terms of the rule as so far presented, the very sentence which

was embedded in producing 209, 210, may be embedded in Q position in

212. elloorum Q vi|ayaaTTuttoo|iyiTamiruntu atayk kaNTupiTittaarka|.

"Everyone found it out from the playmate."

to give

213. elloorum siRumi irakasiyattays sonna vi|ayaaTTuttoo|iyiTamiruntu atayk kaNTupiTittaarka|.

"Everyone found the secret out from the playmate to whom the little girl had told it." ,

a sentence which, while not being absolutely free of awkwardness, is undisputedly grammatical, even though in its production the NO of the embedded sentence had lost its dative case inflection. This demonstrates that no effective structural generalization relating to the source of NO in the embedded sentence or to its inflections can be made to prevent the generation of sentences like 209.

Since, however, the NOs qualified in 209 and 213 are developed from different nodes, it might still be argued that there is a grammatical restriction on the generation of sentences like 209, but that this restriction should be specified in terms of the source of NO in the matrix. Here too, however, no generalization is possible, for in 207, for example, the NO qualified in the matrix is developed from the very same node as that qualified in 209. In fact, both the NOs involved in 207 have the same sources as the corresponding NOs in 209. Since 207 is a perfectly

grammatical sentence, it appears evident that whatever differences there are between it and 209 as far as acceptability goes, they are not to be explained in structural terms. That is to say, all the evidence suggests that 209 is not in fact an ungrammatical string. What is involved appears to be not so much a matter of grammaticality as of stylistics: 207, 209 and 213 are at various points on the scale of acceptability, with 207 at one extreme, 209 at the other, and 213 somewhere in between.

The rule to be discussed next will account for the remaining instances when sentences containing the Quotative Verb may be embedded in Qualifier position. This rule differs from the general Adjectivalization rule discussed above in that the composition and elements of Quotat in the sentence to be embedded are of key significance to its operation. In this rule, the Quotat is required to be of the pattern NP ^ Comp ^ $V_{\text{Cop Iden}}$. Moreover, the subject NP of this Quotat is required to be identical with the NP qualified. This latter NP cannot be an embedded sentence. The embedded sentence cannot be Imperative, while the Quotative Verb in it cannot take Neg as a modifier. If the Quotative Verb is not the main verb of the sentence to be embedded, it must be the main verb of a sentence that has previously been embedded in this sentence by the Factive Object transformation (T 38). An illustration of a sentence produced by this rule is 203 in its reading 206. In this reading, 203 has been produced by embedding

214. vayttiyan manitan payttiyakkaaran (aavaan) enRu sonnaan.

"The doctor said that the man was mad."

in Q position in 205.

When, as in 214, the Quotative Verb belongs to an already embedded sentence, the main verb of the sentence to be embedded by the rule under discussion cannot be an Irregular Impersonal verb.

In the ordering of the rules below, the more particular rule just discussed will precede the general Adjectivalization rule considered earlier.

The next two Adjectivalization rules share many features with the two already discussed. They also embed one sentence as a S Qualifier of an element in another. Moreover, the major condition on their operation too is that the embedded sentence should contain an element that is identical with the element qualified. They differ from the rules already dealt with, however, in that at least one of the operative elements (operative in the sense that it is their identity with each other that enables the embedding to take place) is required to be the noun-like Adverbial element, M_a. The kind of sentence they account for is illustrated by (the somewhat awkward)

215. rukmani tanakku naaṭṭiyaasiriyar aaṭak kaRpitta lalitamaana vitamaaka aaṭinaaḷ.

"Rukmani danced in the graceful manner in which the dancing master had taught her to." ,

which is derived by embedding

216. naaṭṭiyaasiriyar rukmanikku lalitamaana vitamaaka aaṭak kaRpittaaḷ.

"The dancing master taught Rukmani to dance gracefully."

in Q position in

217. rukmani Q lalitamaana vitamaaka aaṭinaaḷ.

"Rukmani danced gracefully."

In this particular case, the operative elements (these are underlined) in the sentences involved are both M_a s. This is not, as has been indicated, a necessary condition on the transformation, for only one of these elements need be a M_a. If the latter is the case, the non-M_a element involved will (as is to be expected from the comments made about the nominal quality of M_a during the discussion of PS 43) be required to be a nominal. This means that the identity of a M_a in one sentence with a nominal in another will enable either the former sentence to be embedded as a S Qualifier of the nominal in the latter, or the latter sentence to be embedded as a S Qualifier of the M_a in the former. To illustrate the first of these possibilities,

218. aasiriyar puttakattay av vitamaaka eḻutinaan.

"The author wrote the book in that manner."

may be embedded in Q position in

219. vimarsakan Q av vitattay kaṇṭittaan.

"The critic condemned the manner ____."

to give

220. vimarsakan aasiriyar puttakattay eḻutina vitattay kaṇṭittaan.

"The critic condemned the manner in which the author wrote the book."

(The deletion of the Demonstrative Qualifier taken by the nominal qualified by 218 in 220 is a point that a later rule (T 52) will account for.)

Whether both the operative elements in the sentences involved in the Adjectivalization transformation are $\underline{M_a}$ s, or whether only one of them is a $\underline{M_a}$, the basic operations carried out are the same. It makes for a convenient statement, however, to formalize these operations by means of two different rules. The first of these will embed sentences in which the operative element is a $\underline{M_a}$ as $\underline{S}$ Qualifiers of either another $\underline{M_a}$ or a nominal, while the second will embed sentences in which the operative element is a nominal as $\underline{S}$ Qualifiers of a $\underline{M_a}$.

The first rule will indicate, among other things, that the $\underline{M_a}$ in the sentence to be embedded cannot itself belong to an embedded sentence, unless the latter has been embedded by either of the $\underline{S_{In}}$ transformations (Ts 39 and 40). Thus 216 was not prohibited from embedding in $\underline{Q}$ position in 217 although the $\underline{M_a}$ in it belonged to an embedded sentence because this latter sentence had been embedded by T 39. The rule will also indicate that the $\underline{M_a}$ in

the sentence to be embedded cannot be developed from the node Quotat.

In all other respects, the conditions on the rule are identical with the conditions on the general Adjectivalization rule already dealt with (making allowance, of course, for the fact that in one case it is a M_a which is involved, while in the other it is a nominal), and they will not, therefore, be repeated here. It should, however, be pointed out that although the rule allows the operative elements in the sentences involved considerable freedom in taking Qualifiers, in practice they are not as unrestricted in their behaviour with regard to this matter as this suggests. Firstly, M_a cannot take a Poss Qualifier, a fact which, in a complete grammar, would already have been indicated by the lexicon. Secondly, the Qualifier almost invariably chosen is the Demonstrative, and this too is usually deleted (by T 52 below). (It is this last point which explains the awkwardness of 215: M_a in it takes an Adjectival Qualifier.)

The second rule under discussion will incorporate two sets of features: those of the rule just discussed, and those of the general Adjectivalization rule discussed earlier that are compatible with the first set of features.

All the Adjectivalization rules discussed make the following two changes in the strings they operate on. They delete the operative nominal or M_a in the embedded sentence, together with its Qualifiers and affixes, and convert the last verbal element in this sentence into its conjunctival participial form.

T 41 Adjectivalization: Embedding of Certain Strings Containing the Quotative Verb

$$W - A \hat{} (Qual_1)\ Nom_{1sub} \hat{} Comp \hat{} V_{Cop\ Iden} \hat{} Quot.Vb \hat{} B$$

$$(Part. \hat{} VB \hat{} Modif) - (Qual_2)\ Nom_2 - Z \Rightarrow$$

$$W - A \hat{} Comp \hat{} Quot.Vb \hat{} B\ (Part. \hat{} VB \hat{} Modif)$$

$$Conj.Part. - (Qual_2)\ Nom_2 - Z$$

where

A...Modif	/	S ← Det
A...B	/	S embedded by T 38, if the non-Qual items within brackets are chosen
$NP_1 \ldots V_{Cop\ Iden}$	/	Quotat
$Qual_1$	=	$Qual_2$ ∉ S ← Det
Nom_1	=	Nom_2 / $\begin{Bmatrix} N \\ Pron \end{Bmatrix}$
VB	≠	Irregular Impersonal Verb
Modif	c	Modal only if Modal / $\begin{Bmatrix} Poten \\ Jussive \end{Bmatrix}$
A	∉	$\begin{Bmatrix} Imp \\ SE_1 \end{Bmatrix}$
B	∉	$\begin{Bmatrix} SE_2 \\ Neg \end{Bmatrix}$

T 42 Adjectivalization: General

$$W - A \hat{} B \hat{} (Qual_1)\ Nom_1\ (case)\ (postfix) \hat{} C \hat{} VB \hat{}$$

$$Modif\ (D) - (Qual_2)\ Nom_2 - Z \Rightarrow$$

$$W - A \hat{} B \hat{} C \hat{} VB \hat{} Modif\ (D)\ Conj.Part. -(Qual_2)\ Nom_2 - Z$$

where $A...(D) \ / \ S \leftarrow Det$

$B...Modif \ / \ S$ embedded by { T 38 if D is chosen and if VB / Quot. Vb ; T 39 or T 40 if D is chosen }

$$VB \not\leftarrow \left\{ \begin{matrix} V_{Pos} \\ V_{Cop\ Iden} \end{matrix} \right\}$$

$$Nom_1 \ / \left\{ \begin{matrix} \text{Subject of } A...(D) \\ \quad \text{if } \left\{ \begin{matrix} VB \ / \left\{ \begin{matrix} V_{Cop\ Act} \\ \text{Quot. Vb} \end{matrix} \right\} \\ A...(D) \Leftarrow \left\{ \begin{matrix} T\ 5 \\ T\ 9 \end{matrix} \right\} \end{matrix} \right. \\ \text{Object of } A...(D) \\ \quad \text{if } A...D \ / \ \text{Irregular Impersonal sentence} \end{matrix} \right\}$$

$$Qual_1 = Qual_2 \not\leftarrow S \leftarrow Det$$

$$Nom_1 = Nom_2 \ / \left\{ \begin{matrix} N \\ Pron \end{matrix} \right\}$$

$$\begin{Bmatrix} B \\ C \end{Bmatrix} \not\in \text{Quot.Vb}$$

postfix / -aal introduced by T 3

$$\begin{Bmatrix} \text{Modif} \\ D \end{Bmatrix} \quad c \quad \text{Modal only if Modal} \quad / \quad \begin{Bmatrix} \text{Poten} \\ \text{Jussive} \end{Bmatrix}$$

$$A \not\in \begin{Bmatrix} \text{Imp} \\ SE_1 \end{Bmatrix}$$

$$D \not\in \begin{Bmatrix} \text{Quot.Vb} \\ SE_2 \end{Bmatrix}$$

T 43 Adjectivalization: Embedding of Strings Involving M_a

$$W - A \hat{} B \hat{} (Qual_1)\ M_{a_1} \hat{} AM_1 \hat{} C \hat{} VB \hat{} Modif\ (D) -$$

$$(Qual_2) \begin{bmatrix} M_{a_2} \hat{} AM_2 \\ N \end{bmatrix} - X \Rightarrow$$

$$W - A \hat{} B \hat{} C \hat{} VB \hat{} Modif\ (D)\ Conj.Part. - (Qual_2)$$

$$\begin{bmatrix} M_{a_2} \hat{} AM_2 \\ N \end{bmatrix} - X$$

where A...(D) / S ← Det

B...Modif / S embedded by T 39 or T 40 if D is chosen

$$VB \not/ \begin{Bmatrix} \text{Irregular Impersonal Verb} \\ V_{\text{Cop Iden}} \\ V_{\text{Pos}} \end{Bmatrix}$$

$$M_{a_1} \not\subset (X \leftarrow) \text{ Quotat}$$

$$\text{Qual}_1 = \text{Qual}_2 \not\subset S \leftarrow \text{Det}$$

$$M_{a_1} = \begin{Bmatrix} M_{a_2} \\ N \end{Bmatrix}$$

$$\begin{Bmatrix} \text{Modif} \\ D \end{Bmatrix} \subset \text{Modal only if Modal} \; / \; \begin{Bmatrix} \text{Poten} \\ \text{Jussive} \end{Bmatrix}$$

$$A \not\subset \begin{Bmatrix} \text{Imp} \\ SE_1 \end{Bmatrix}$$

$$D \not\subset \begin{Bmatrix} \text{Quot.Vb} \\ SE_2 \end{Bmatrix}$$

T 44 <u>Adjectivalization: Embedding of Strings Involving Nominals as Qualifiers of M_a</u>

$$W - A \hat{} B \hat{} (\text{Qual}_1)\ N\ (\text{case})\ (\text{postfix}) \hat{} C \hat{} VB \hat{} \text{Modif}\ (D) -$$

$$(\text{Qual}_2)\ M_a - Z \Rightarrow$$

$$W - A \hat{} B \hat{} C \hat{} VB \hat{} \text{Modif}\ (D)\ \text{Conj.Part.} - (\text{Qual}_2)$$

$$M_a - Z$$

where A...(D) / S ← Det

B...Modif / S embedded by T 39 or T 40 if D is chosen

$$VB \not\prec \begin{Bmatrix} V_{Pos} \\ V_{Cop\ Iden} \end{Bmatrix}$$

$$N \not/ \begin{Bmatrix} \text{Subject of A...(D)} \\ \quad \text{if} \begin{Bmatrix} VB \not/ V_{Cop\ Act} \\ A...(D) \Leftarrow \begin{Bmatrix} T\ 5 \\ T\ 9 \end{Bmatrix} \end{Bmatrix} \\ \text{Object of A...(D)} \\ \quad \text{if A...(D)} \not/ \text{Irregular Impersonal sentence} \end{Bmatrix}$$

$$N \not\prec (X \leftarrow)\ \text{Quotat}$$

$$Qual_1 = Qual_2 \not\in S \leftarrow Det$$

$$N = M_a$$

$$\begin{Bmatrix} B \\ C \end{Bmatrix} \not\in \text{Quot.Vb}$$

$$\begin{Bmatrix} \text{Modif} \\ D \end{Bmatrix} c\ \text{Modal only if Modal} \not/ \begin{Bmatrix} \text{Poten} \\ \text{Jussive} \end{Bmatrix}$$

$$\text{postfix} \not/ \underline{\text{-aal}}\ \text{introduced by T 3}$$

$$A \not\in \begin{Bmatrix} \text{Imp} \\ SE_1 \end{Bmatrix}$$

$$D \not\in \begin{Bmatrix} \text{Quot.Vb} \\ SE_2 \end{Bmatrix}$$

In the discussion of the transformation of Simultaneous Action (Ts 15 and 16), it was stated that there is one important device for signalling the simultaneity of any two given actions that

will be accounted for not by the Simultaneous Action rules but by an Adjectivalization rule. The kind of string which incorporates this device is produced by the General Adjectivalization rule above, when it embeds a sentence as a Qualifier of a Time Noun (N_T). If the operative $\underline{N_T}$ s in both the matrix and the embedded sentence involved in this process are dominated by the node Partic, and if the $\underline{N_T}$ in the embedded sentence has been developed neither from yet another embedded sentence nor from Quotat, then the string which results can signal the simultaneity of the actions denoted by the verbs of the component sentences. Thus when

221. peeraasiriyar appoḷutu paḻaya pattiraŋkaḷay paṭittaan.
"The Professor studied the old documents at that time."

is embedded by the General Adjectivalization rule in Q position in

222. peeraasiriyar Q appoḷutu sila viyappaṭayas seykiRa viʃayaŋkaḷay kaṇṭupiṭittaar.
"The Professor discovered some startling things at that time." ,

the actions denoted by the two verbs involved in the resulting string

223. peeraasiriyar paḻaya pattiraŋkaḷay paṭitta poḷutu sila viyappaṭayas seykiRa viʃayaŋkaḷay kaṇṭupiṭittaar.
[[The Professor discovered some startling things at the time he was studying the old documents]]

can be interpreted as occurring simultaneously. (223 incorporates

a change that will be accounted for by a later Deletion rule(T 52): the deletion of the Demonstrative Qualifier a from before the Time Noun qualified.)

Where there is any particular reason for stressing the simultaneity of the actions denoted by the verbs involved in such strings as 223, a further optional device is made use of. This consists of the conversion of any non-Present tense marker in the embedded sentence to Present. 223 subjected to this change will become

224. peeraasiriyar paḷaya pattiraṇkaḷay paṭikkiRa poḷutu sila viyappaṭayas seykiRa viʃayaṇkaḷay kaṇṭupiṭittaar.
"While the Professor was studying the old documents, he discovered some startling things."

T 45 (Optional) Simultaneous Action - Adjectivalized Strings

$$W - A - VB - C - \left\{\begin{matrix}\text{Past}\\ \text{Fut}\end{matrix}\right\} - \text{Conj.Part.} - N_T - Z \Rightarrow$$

$$W - A - VB - C - \text{Pres} - \text{Conj.Part.} - N_T - Z$$

where $A \ldots \left\{\begin{matrix}\text{Past}\\ \text{Fut}\end{matrix}\right\}$ / S embedded by T 42.

N_T ← Partic ≠ (X ←) Quotat

N_T deleted by T 42 ← Partic ≠ { (X ←) Quotat ; an already embedded sentence }

The next three Adjectivalization rules embed sentences in Descrip, Equat and Poss positions (PS 68) respectively. The discussion below will confine itself to citing illustrations of each of these, and enumerating the factors which distinguish them from each other and from the Adjectivalization rules already dealt with (Ts 41 to 44). In fact, however, these three rules resemble each other and Ts 41 to 44 very closely. For instance, they too embed sentences in specified Qualifier positions before elements in other sentences, the main condition on the operation being that the embedded sentences should contain an element which is identical with the element qualified. As in Ts 41 to 44, if the two operative elements take other Qualifiers, these too are required to be identical with each other, with one exception, which is exactly parallel to the exception to this condition in Ts 41 to 44. Similarly, these three rules, like Ts 41 to 44, effect the following changes in the strings they operate on: they delete the operative element from the embedded sentence, and convert the last verbal element in it into its conjunctival participial form. In the discussion of the three rules below, therefore, it will not be necessary to restate the more general characteristics which these rules share with Ts 41 to 44. The assumption will be that all the statements made about Ts 41 to 44, in so far as they are compatible with the more specific comments made about the three rules below, will apply to these rules too.

The first of the rules under discussion embeds a sentence which has a V_{Pos} as its main verb as a Descriptive Qualifier of a nominal or a M_a in another sentence. The embedded sentence is required to contain a nominal developed from either Rec or Loc which is identical with the element qualified. Any Qualifier taken by one of the operative elements must be taken also by the other, with the one exception that the nominal or M_a in the embedded sentence cannot take a Descrip Qualifier, whereas the nominal in the matrix must take one, which is the embedded sentence itself. V_{Pos} may be realized as aaka only if the operative nominal in the embedded sentence is developed from Loc. The kind of sentence this transformation accounts for is illustrated by

225. teesiya uṉarssiyuḷḷa teesapaktarkaḷ sutantira iyakkattil iṭupaṭṭaarkaḷ.
"Patriots who had nationalistic sentiments participated in the Independence Movement."

which is derived by embedding

226. teesapaktarkaḷukku teesiya uṉarssiyuḷḷatu.
"Patriots have nationalistic sentiments."

in Descrip position in

227. Descrip teesapaktarkaḷ sutantira iyakkattil iṭupaṭṭaarkaḷ.
"Patriots participated in the Independence Movement."

The second of the rules below embeds a sentence whose main verb is $V_{Cop\ Iden}$ in Equational Qualifier position before a

nominal element or a M_a in another sentence. The subject nominal of the embedded sentence is required to be identical with the element qualified. Again, the identity condition extends in a parallel way to that described above to the Qualifiers taken by the elements involved. The kind of sentence this rule accounts for is illustrated by

228. maaɳavan keeɭvikku sariyaana viṭay aɭittaan.

"The student gave the correct answer to the question." ,

which is derived by embedding

229. viṭay sariyaakum.

"The answer is correct."

in Equat position in

230. maaɳavan keeɭvikku Equat viṭay aɭittaan.

"The student gave the answer to the question."

The third rule below embeds a sentence whose main verb is the V_{Pos}, uḷ, in Possessive Qualifier position before a nominal or a M_a in another sentence. The major condition on this operation is that the embedded sentence should contain, among other elements, a subject nominal that is identical with the element qualified, and a nominal that is developed from Rec. The identity condition extends to any Qualifier taken by the elements involved in a parallel way to that described above. The kind of sentence this rule accounts for is illustrated by

231. peeyaaṭṭi tanakkuḷḷa payaŋkaramaana mukamuuṭiyay kaɭaRRinaan.

"The devil dancer took off the frightening mask he had." ,

which is formed by embedding

232. peeyaaṭṭikku payaṇkaramaana mukamuuṭi uḷḷatu.

"The devil dancer had a frightening mask."

in Poss position in

233. peeyaaṭṭi Poss payaṇkaramaana mukamuuṭiyay kaḷaRRinaan.

"The devil dancer took off the frightening mask."

(231 has been subjected to a Reflexivization rule which is of no particular relevance at this point.)

The fact that the three rules just described share many fundamental characteristics with each other and with the Adjectivalization rules dealt with earlier on makes it necessary, before setting them out, to explain why they have been treated as separate transformations based on different PS nodes rather than as different manifestations of the one transformational process based on a single PS node. That is to say, it is necessary to explain why there are four different Qualifier elements in the PS rules, S, Descrip, Equat and Poss, rather than a single element S, whose variations in composition and so on would account for all four kinds of string produced by the transformations described. The main reason for setting up four different Qualifier nodes as has been done is that any given nominal may take all four of these Qualifiers on any given occasion, although for stylistic reasons it will generally not take more than three of them at a time. Thus it is possible to have a sentence like

234. sutantira iyakkattil iiṭupaṭṭa teesa paktaraana en talayvan siRayil iRantaan.

"My leader, who was a patriot, and who had taken part in the Independence Movement, died in prison." ,

where the nominal (underlined twice) has taken the Qualifiers, S, Equat and Poss (each underlined once). If all these three Qualifiers are to be derived by means of just one of the Adjectivalization transformations described, it will not be possible to account for 234, for, whichever of the transformations is chosen for the purpose, the conditions on it will not permit the kind of controlled recursion which, under such an interpretation, will be involved in 234. Moreover, there will be no way of modifying these conditions so as to permit this kind of recursion.

T 46 Adjectivalization: Descriptive Qualifier

$$W - A \hat{} (Qual_1)\ Nom_1 \hat{} B \hat{} C \hat{} V_{Pos} \hat{} D - (Qual_2) \begin{bmatrix} Nom_2 \\ M_a \end{bmatrix} - Z \Rightarrow$$

$$W - A \hat{} C \hat{} V_{Pos} \hat{} D \hat{} Conj.Part. - (Qual_2) \begin{bmatrix} Nom_2 \\ M_a \end{bmatrix} - Z$$

where $A...D \ / \ Descrip$

$$(Qual_1)...B \leftarrow \begin{Bmatrix} Rec \\ Loc \end{Bmatrix}$$

$$V_{Pos} \ / \ \begin{Bmatrix} \underline{iru} \\ \underline{ul} \\ \underline{aaka} \end{Bmatrix} \text{ where } (Qual_1)...B \leftarrow Loc$$

$$V_{Pos} \quad / \quad \left\{\begin{matrix}\underline{iru} \\ \underline{ul}\end{matrix}\right\}$$

$$Qual_1 \quad = \quad Qual_2 \quad \not< \quad Descrip$$

$$Nom_1 \quad = \quad \left\{\begin{matrix}Nom_2 \\ M_a\end{matrix}\right\}$$

T 47 Adjectivalization: Equational Qualifier

$$W - A \hat{} (Qual_1)\ Nom_{1sub} \hat{} B \hat{} V_{Cop\ Iden} \hat{} C - (Qual_2)$$

$$\left[\begin{matrix}Nom_2 \\ M_a\end{matrix}\right] - Z \Rightarrow$$

$$W - A \hat{} B \hat{} V_{Cop\ Iden} \hat{} C \hat{} Conj.Part. - (Qual_2)$$

$$\left[\begin{matrix}Nom_2 \\ M_a\end{matrix}\right] - Z$$

where $A...C \quad / \quad Equat$

$$Qual_1 \quad = \quad Qual_2 \quad \not< \quad Equat$$

$$Nom_1 \quad = \quad \left\{\begin{matrix}Nom_2 \\ M_a\end{matrix}\right\}$$

T 48 Adjectivalization: Possessive Qualifier

$$W - A \hat{} Rec \hat{} B \hat{} (Qual_1)\ Nom_{1sub} \hat{} V_{Pos} \hat{} C - (Qual_2)$$

$$\left[\begin{matrix}Nom_2 \\ M_a\end{matrix}\right] - Z \Rightarrow$$

$$W - A \hat{} Rec \hat{} B \hat{} V_{Pos} \hat{} C \hat{} Conj.Part. - (Qual_2)$$

$$\begin{bmatrix} Nom_2 \\ M_a \end{bmatrix} - Z$$

where $A...C \;/\; Poss$

$V_{Pos} \;/\; \underline{ul}$

$Qual_1 = Qual_2 \not\in Poss$

$Nom_1 = \left\{ \begin{bmatrix} Nom_2 \\ M_a \end{bmatrix} \right\}$

Certain of the strings produced by the Possessive transformation above contain in their embedded sentence the source of the Possessive particle and the Possessive pronouns. The next few rules will be devoted to the derivation of these elements from such strings. They will, that is, account for the derivation of strings like

235. peeyaaṭṭi <u>tannuṭaya</u> payaṉkaramaana mukamuuṭiyay kaḷaRRinaan.
"The devil dancer took off his frightening mask."

from 231 above. The first rule below will indicate that if, in a string produced by T 48, the embedded sentence contains only the elements <u>Rec</u> and the verb <u>ul</u> in its conjunctival participial form (the subject nominal has, of course, been deleted by T 48), the dative case inflection of this <u>Rec</u> nominal may optionally be deleted, and the verb replaced by the Possessive particle.

T 49 (Optional) Derivation of Possessive Particle

W - NP ^ dat.c - ul ^ Conj.Part. - Z ⇒

W - NP ^ Poss.P - Z

where W...Z ⇐ T 48

NP ^ dat.c / Rec

The Possessive Particle introduced by T 49 has various exponents which behave in different ways. The rules which follow will account for these behavioural differences. The label Poss.P covers a maximum of three elements, one of which will for the time being be labelled p. The other two of these elements have the shapes uṭaya and atu respectively. In the environment of Third Person non-Neuter pronouns and non-Neuter nouns, these three elements may appear either as alternatives, as in

236. a) manitanin puttakam
b) manitanuṭaya puttakam
c) manitanatu puttakam

(all three of these translate "the man's book"), or (although the redundancy of such behaviour renders the construction awkward) in the order p followed by any one of the other two, as in

237. selviyinuṭaya maalay

"Selvi's necklace" .

In the environment of all other pronouns and nouns the elements appear in the order p followed optionally by any one of the other two, although generally only p is chosen. An example to illustrate the choice of both elements is the rather awkward

238. maaṭṭinuṭaya kompukaḷ

"the bull's horns" ,

a phrase whose more usual form would be

239. maaṭṭin kompukaḷ.

The next rule will account for the facts just stated.

T 50 Development of the Possessive Particle

T 50.1

$$X - NP \hat{} Poss.P - Z \Rightarrow$$

$$X - NP \hat{} (p) \left(\left\{ \begin{matrix} \text{-uṭaya} \\ \text{-atu} \end{matrix} \right\} \right) - Z$$

where NP / (Qual) [$\left\{ \begin{matrix} + \text{ N} \\ + \text{ Pron, + Thd P} \end{matrix} \right\}$, - Neut, ...]

T 50.2

$$X - NP \hat{} Poss.P - Z \Rightarrow$$

$$X - NP \hat{} p \left(\left\{ \begin{matrix} \text{-uṭaya} \\ \text{-atu} \end{matrix} \right\} \right) - Z$$

The bracketing of the exponents of Poss.P in T 50.1 is not to be interpreted as implying that no one of them need be chosen.

In the case of possessive constructions produced by T 50.1, any or all of the Possessive elements chosen may be optionally deleted, except in two contexts. These are a) when the nominal qualified, whether noun or pronoun, takes any other Qualifiers, and b) when the nominal qualified is a pronoun. Thus

240. kantanuṭaya viiṭu
"Kandan's house"

may become

241. kantan viiṭu,

but

242. kantanuṭaya periya viiṭu
"Kandan's big house"

may not be so changed. When the element signifying possessor in the possessive construction derived by means of T 50.2 is a Neuter noun, p may optionally be deleted (which implies, in terms of the rule above, that neither of the other Possessive elements may be chosen) under conditions identical with those described immediately above. Thus

243. puunayin kooppay
"the cat's saucer"

may become

244. puunay kooppay.

The ability to delete the Possessive elements often remains unexploited because the resulting sentences could be ambiguous as well as, in many instances, highly awkward.

In the case of possessive constructions involving First and Second Person pronouns, and Third Person Neuter pronouns, p may in no circumstances be deleted. With these pronouns p manifests itself by changing their shape, as illustrated by

245. a) naan "I" ^ p → en "my"

b) naaŋkaɭ "we" ^ p → eŋkaɭ "our"

c) naam "we" ^ p → em "our"

d) nii "you" (Sg) ^ p → un "your" (Sg)

e) niir, niiŋkaɭ "you" (Pl, Hon) ^ p → uŋkaɭ "your" (Pl, Hon)

f) atu "it" ^ p → atan "its"

g) avay "they" (Neut) ^ p → avaRRin "their" (Neut)

The details illustrated by 245 are a matter for the morphophonemic rules to attend to.

T 51 (Optional) Deletion of Possessive Elements

T 51.1

$$X - NP \text{ ^ } (p) \left\{ \begin{matrix} -uɭaya \\ -atu \end{matrix} \right\} - N - Z \Rightarrow$$

$$X - NP - N - Z$$

where X $\not\in$ Qual of N

T 51.2

$$X - NP \hat{} p - N - Z \Rightarrow$$

$$X - NP - N - Z$$

where $NP \;/\; (Qual)\ [+N, +Neut, \ldots]$

$X \not\in Qual\ of\ N$

The last of the rules specifically relating to the Adjectivalization transformations discussed above is an optional rule which deletes any Demonstrative Qualifier taken by an element which has been assigned a sentence as a Qualifier. The kind of operation it accounts for has been illustrated by 220 and 223 above.

T 52 (Optional) <u>Deletion of Demonstrative Qualifier</u>

$$W - \begin{bmatrix} Sent_1 \hat{} Conj.Part. - Demons \\ Demons - Sent_2 \hat{} Conj.Part. \end{bmatrix} - Y - Nom - Z \Rightarrow$$

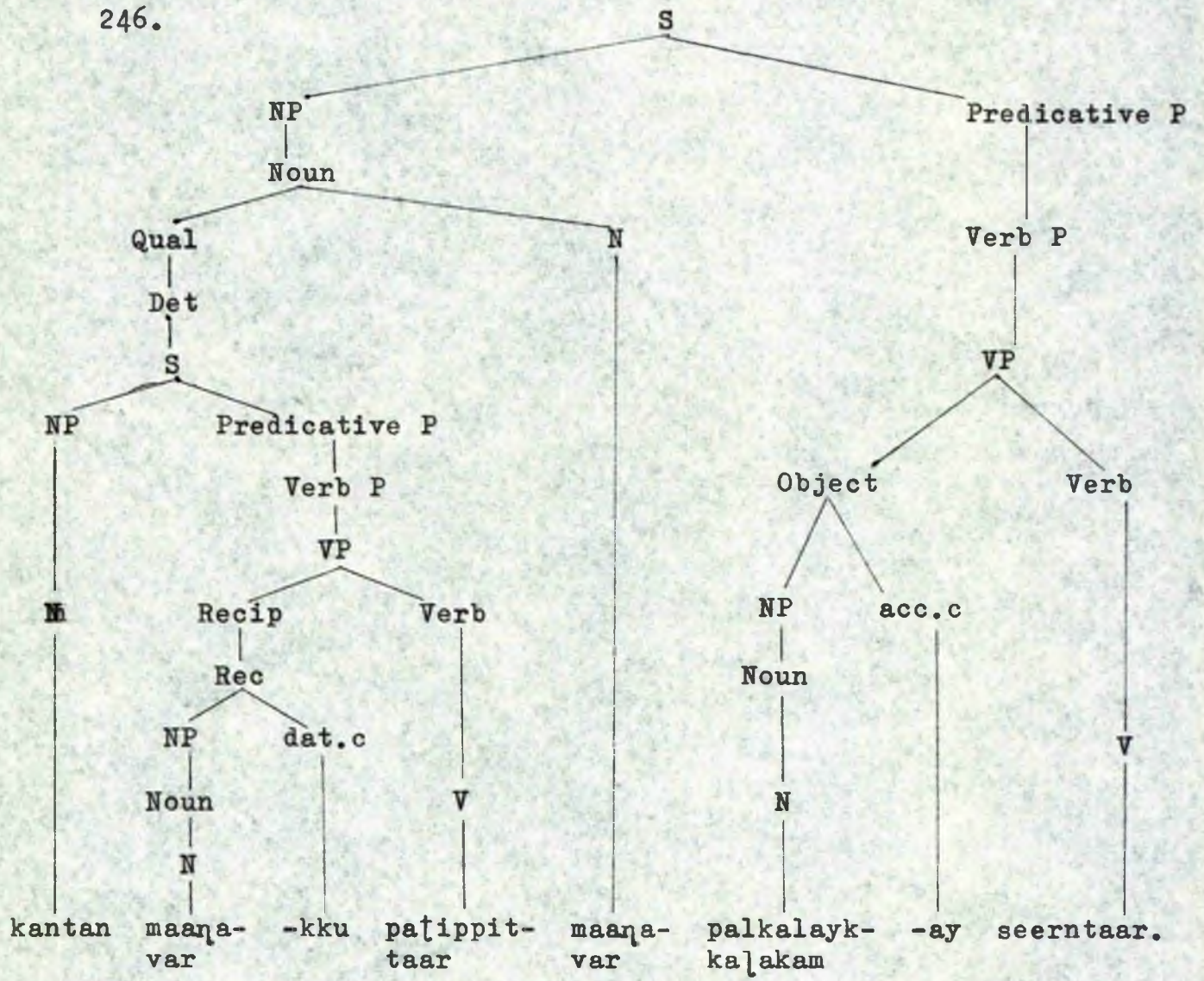
$$W - \begin{bmatrix} Sent_1 \hat{} Conj.Part. \\ Sent_2 \hat{} Conj.Part. \end{bmatrix} - Y - Nom - Z$$

where $Sent_1 \leftarrow S \leftarrow Det$

$Sent_2 \leftarrow \begin{Bmatrix} Descrip \\ Equat \\ Poss \end{Bmatrix}$

The kind of derivational tree which will be assigned to strings derived by means of the various Adjectivalization transformations is illustrated by 246 below, which would be assigned to 207 c).

246.



The next set of rules will be concerned with the Question transformations. The PS rules had developed the Question node into two, Q_E , denoting questions which expect an answer other than oom "yes"

or illay "no", and Q_{AA} , denoting questions which expect an answer oom or illay. The rules associated with Q_E will be considered first below. No particular structural motivation exists for treating them before the rules associated with Q_{AA} . It must be pointed out, however, that they must be ordered before the Concord rules because certain features accounted for by the latter depend on question words introduced by them.

The rules for the construction of interrogatives by means of Q_E raise certain problems which are associated with the fact that they appear to be a kind of deletion rule whereby the element questioned in a string is deleted by Q_E , which subsequently combines with a residue of features left behind by the deleted element to form a question word. Chomsky has pointed out that it is in the interests of descriptive adequacy that a deleted element should always be recoverable, so that "a deletion operation can eliminate only a dummy element, or a formative explicitly mentioned in the structure index..., or a designated representative of a category..., or an element that is otherwise represented in the sentence in a fixed position." [8] To the interrogative transformation under discussion, it is the third of the alternatives that is relevant. Elsewhere,[9] Chomsky further explicates the notion underlying this alternative. He says, "Each major category has associated with it a 'designated element' as a member. This designated element may

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8. Chomsky (1965), pp. 144-145.
9. Chomsky (1964), p. 41.

actually be realized,....or it may be an abstract dummy element." , and continues, "It is this designated representative of the category that must appear in the underlying strings that do not preserve, in the transform, a specification of the actual terminal representative of the category in question."

This suggestion of Chomsky's will be adopted below as the basis of the treatment of the rules by means of which Q_E interrogatives are derived. Supporting such a course of action is the fact that the same general considerations which led Chomsky to make his suggestion are equally relevant to the derivation of Q_E interrogatives in Tamil. It is not necessary to reiterate these considerations at length here. It might briefly be mentioned, however, that the kind of device that Chomsky, in the passages quoted above, suggests should be utilized in the treatment of, among other things, Wh-questions in English, equally helps, in dealing with Q_E interrogatives in Tamil, to ensure that the interrogative strings derived are not multiply ambiguous. Moreover, there are some very significant distributional similarities between the question words in these interrogative strings on the one hand and certain specifiable members of the major categories in the language on the other which suggest that it is necessary, in the interests of descriptive adequacy, to set up the latter as designated representatives of the categories to which they belong, and to derive the question words from them. Chomsky, dealing with the "non-deleting interrogatives" of English,

suggests, on the basis of such distributional similarities, that the designated representatives of the various categories are the Singular Indefinite forms.[10] In Tamil, however, there is a strong case to suggest that the designated elements are the definite rather than the indefinite forms. A large number of the major categories of Tamil contain definite elements whose definiteness is signalled by the presence in them of one of the two prothetic particles, a and i. This is illustrated for the different categories, Time, Locative, Manner Adverb and Demonstrative respectively, by the following sentences.

247. kantan [a / i]ppoḻutu sirittaan.

"Kandan laughed [then / now]."

248. raaman [a / i]ŋkee vaaḻntaan.

"Rama lived [there / here]."

249. murukan [a / i]ppaṭi naṭantaan.

"Murukan behaved in [that / this] manner."

250. arasaaŋkam [a / i]pputtakattukku taṭayuttaravu pooṭṭatu.

"The Government banned [that / this] book."

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10. Chomsky (1964), pp. 39 - 41.

In every instance when the categories here illustrated are "questioned" by Q_E , the forms used in 247 to 250 are transferred to the resulting interrogative string with the one change that the prothetic particle a or i is replaced by the interrogative particle e. Thus corresponding to the statements 247 to 250 are the questions

251. kantan eppoḻutu sirittaan?
"When did Kandan laugh?" ,

252. raaman eṉkee vaaḻntaan?
"Where did Rama live?" ,

253. murukan eppaṭi naṭantaan?
"How did Murukan behave?"

and

254. arasaaṉkam epputtakattukku taṭayuttaravu pooṯṯatu?
"Which book did the Government ban?"

respectively. These sentences demonstrate that the prothetic and the interrogative particles are in complementary distribution, so that e might in fact be interpreted as the form the prothetic particle assumes in the environment of Q_E . This combines with other distributional factors to establish that it is the definite members of the major categories in Tamil that must represent them in the Q_E rules as their designated elements.

The isolation of the designated element is not, of course, always as simple as it is in the examples discussed above. In the intuition of the native user , a sentence like

255. ammaa pillaykku saappiṭa mun kayyay kaḻuvas sonnaaḷ.

"The mother told the child to wash his hands before eating.",

for example, which is formed by embedding one sentence (the portion underlined) in $S_{In\ Imp}$ position in another (see T 40), has, among the interrogatives corresponding with it, one of the form

256. ammaa pillaykku $\left\{\begin{matrix}\text{enna}\\\text{etay}\end{matrix}\right\}$ sonnaaḷ?

"What did the mother tell the child?" ,

where the $S_{In\ Imp}$ has been questioned by Q_E. Clearly, there is no actual member of the class of embedded sentence questioned that has the form Prot.P $\widehat{\ }\left\{\begin{matrix}\text{-nna}\\\text{-tu}\end{matrix}\right\}$. However, generalizing from the conclusions drawn from 247 to 254, it appears best to set up a dummy element of just this shape as the designated representative of this class. This practice of setting up dummy designated elements, the first of whose component parts is the prothetic particle, will be followed wherever difficulties of the kind illustrated by 255 and 256 arise.

When NPs as wholes or nouns or pronouns are questioned, a different kind of problem relating to the isolation of the designated element arises. In such instances, the question word does not appear to correspond with any particular definite member of the class. Moreover, as 258 below shows, the question word need not always contain the particle e. (258 contains perhaps a unique question word in this respect. It is probable that its deviance

can be explained very simply by a phonetic rule.) To complicate matters further, when the non-Neuter nominal question word yaar appears as the subject of a question, the verb can take freely any of the concordial inflections of number and gender, although it is restricted as far as the category of person goes to the Third person. Thus there can be no question of the form

257. * yaar aniitiyaana kaṭṭaḷayay etirtteen? ,

where the verb has been assigned a First person inflection. There can, however, be a set of questions having the alternative forms indicated in

258. yaar aniitiyaana kaṭṭaḷayay etirtt{aan / aaḷ / aar / aarkaḷ} ?

"Who opposed the unjust order?",

where the verb inflects in turn for the Masculine Singular, the Feminine Singular, the Honorific Singular and the Plural or Honorific. Clearly the alternatives illustrated by 258 are to be attributed to the features carried over from the Animate designated element deleted by the Question transformation. Since no particular member of the category NP offers itself for characterization as this designated element, it is best to set up a dummy element which will be given phonological shape later, but which initially will be taken as consisting of the prothetic particle followed by a bundle of features, which obligatorily includes [+ Thd P].

Proceeding from such general points of principle to specific points relating to the actual formulation of the Q_E rules, it will be found that the attachment of Q_E to the designated elements of various categories cannot be accomplished by a simple rule which lists these designated elements. Illustrative of the problems which interfere with the formulation of such a rule is the following. (Here and below, the symbol DE will be used to refer to the designated elements which represent categories in the Q_E transformation.) Q_E can generally attach itself to the DE of NP in a large variety of functions. Thus it can attach itself to the DE of the underlined Cont NP in

259. ilaŋkayin poruḷaataarattuRay muunRu vaaŋikap payirkaḷil saarntirukkiRatu.
"Ceylon's economy depends on three commercial crops."

to give

260. ilaŋkayin poruḷaataarattuRay evayil saarntirukkiRatu?
"On what does Ceylon's economy depend?"

Where, however, the noun or pronoun head of a NP takes Qualifiers, as payirkaḷ "crops" does in 259, Q_E may instead attach itself to the DE of any one of these Qualifiers. Thus Q_E can attach itself to the DE of the Numeral Qualifier taken by the head of the Cont NP in 259, an operation which will result in the question

261. ilaŋkayin poruḷaataarattuRay ettanay vaaṇikap payirkaḷil saarntirukkiRatu?

"On how many commercial crops does Ceylon's economy depend?"

259 to 261 demonstrate that generally Q_E can attach itself either to the DE of a NP as a whole, or to the DE of a Qualifier taken by the head of a NP. When, however, the Qualifier taken by the head of a NP is an embedded sentence, Q_E becomes able to attach itself to the DE of a third kind of element, the noun or pronoun head of the NP. Thus in

262. tiruṭan murukan neeRRu alumaariyil vayttatay tiruṭinaan.

[[The thief stole that which Murukan placed in the cupboard yesterday]],

Q_E can attach itself to the DE of either the entire Object NP or the pronoun head of this NP. In the former case, the resulting question will be

263. tiruṭan etay tiruṭinaan?

"What did the thief steal?" ,

and in the latter, the rather awkward

264. tiruṭan murukan neeRRu alumaariyil vaytta etay tiruṭinaan?

[[What which Murukan placed in the cupboard yesterday did the thief steal]].

Moreover, $\underline{Q_E}$ can attach itself to the DEs of elements within the embedded sentence Qualifier taken by the head, so that a possible (if highly awkward) question corresponding to 262 is

265. tiruṭan yaar neeRRu alumaariyil vayttatay tiruṭinaan?
[[The thief stole that which who had left in the cupboard yesterday]].

Such details as have been presented in the preceding discussion make it evident that no solution which proposes merely to list the various DEs $\underline{Q_E}$ may attach itself to will satisfy the demands of descriptive adequacy. In the treatment below, therefore, there will first be provided a rule which attaches $\underline{Q_E}$ to an element labelled $\underline{I^{DE}}$. The symbol I covers every major category the whole or parts of which $\underline{Q_E}$ may question. The superscript DE taken by I indicates that in questioning these elements $\underline{Q_E}$ must attach itself not to just any of their members, but to their DEs. This attachment rule will be followed by a series of incorporation rules which will indicate how exactly $\underline{Q_E}$ behaves with sub-categories included within the major categories of the earlier rule. In the case of some of these categories, the attachment rule provides all the information regarding the behaviour of $\underline{Q_E}$ with them, and, therefore, the incorporation rules will not be required to deal with them at all.

Neither the attachment rule nor the incorporation rules below will introduce the DEs of the various interrogated elements in overt phonological shape. Partly, this is because in certain

cases the DE is a dummy element, while in certain other cases a DE having one particular shape may represent more than one category. The rules below will, therefore, deal entirely with abstractions, leaving it to the morphophonemic rules to give overt shape to the various DEs. These considerations also partly explain a final point to be made about procedure, which is that in the illustrative sentences below, it will not be DEs of categories that are used, but various other members of these categories, even though it is not these members that function in the rules.

As mentioned earlier on, the first rule below isolates in general terms the elements Q_E can attach itself to, and brings them together under the common label I^{DE}. Among the items covered by I^{DE} in the rule is one labelled Adverbial. This refers to the DEs of the adverbials, Time, Manner, Loc, Recip, Purpose and Reason. Generally in these cases the DE represents the entire adverbial phrase, so that when Q_E attaches itself to it it may be said to question the whole phrase. So, if Q_E attaches itself to the DE of the underlined Loc phrase in

266. raaman pattu naaṭukaḷin talaynakaraṅkaḷil paṭittirukkiRaan.

"Rama has studied in the capital cities of ten countries."

it will convert the sentence to

267. raaman eṅkee paṭittirukkiRaan?

"Where has Rama studied?"

In most cases, however, Q_E may choose instead to attach itself to the DEs of non-adverbial categories within the adverbial phrase. These categories may be nominals, their Qualifiers or embedded sentences. Separate provision will be made for such instances in the rules, and the label Adverbial in the attachment rule will not be taken as referring to them.

Two of the Manner Adverbial sub-classes covered by the label Adverbial require special comment. These are the sub-classes Qual ^ M_a and M_{Adv}. There is no DE of the former in its entirety, and only the various Qualifiers of M_a within the phrase may be questioned. Thus in the underlined Qual ^ M_a phrase in

268. murukan avvitamaaka tanatu selvattay seekarittaan.
"Murukan amassed his wealth in that way."

Q_E may attach itself to the DE of only the Demonstrative Qualifier a, to give

269. murukan evvitamaaka tanatu selvattay seekarittaan?
"In what way did Murukan amass his wealth?"

M_{Adv}, which had been developed in the PS rules into (Intensif) ^ M_{Ad} (PS 69), poses different problems. In this case, both the entire phrase and the Intensif have DEs, and Q_E may attach itself to either. Thus in

270. avanuṭaya manayvi mika aḷakaaka paaṭukiRaaḷ.
"His wife sings very beautifully."

Q_E can question either the entire underlined M_{Adv} phrase, which will give

271. avanuṭaya manayvi eppaṭiyaaka paaṭukiRaaḷ?

"How does his wife sing?"

or only the Intensif it contains, which will give

272. avanuṭaya manayvi evvaḷavu aḷakaaka paaṭukiRaaḷ?

"How beautifully does his wife sing?"

The label Adverbial in the attachment rule below will thus be seen to cover some items at least which require further development in the incorporation rules. One more comment has to be made about Adverbial before proceeding to the next element covered by I^{DE}. The list given earlier of items covered by Adverbial excluded very few items (such as Condi) from among the Adverbials developed in the PS rules. These apart, however, there are certain other sub-classes developed from the major Adverbial nodes included within Adverbial which should be excluded from it. This is because these sub-classes do not have DEs to which Q_E can attach itself, and the DEs of the major classes they are developed from do not represent them. Among the sub-classes thus excluded from membership of Adverbial in the rule below are Sim A_2, Sub A_2, T_{AD} and Measure (the last containing its own sub-classes) developed from Time, Comm, Conclu and Rec developed from Recip, and Man Condi (containing its own sub-classes) and Represen developed from Manner. To illustrate, the underlined T_{Con} phrase in

273. maaɳavan kaalay iraɳṭu maɳi varay paṭittaan.

"The student studied till 2 a.m."

has no DE to which Q_E may attach itself.

A second element covered by I^{DE} is the NP with a noun or a pronoun as head. Some details about the behaviour of this element with Q_E have already been provided. There are, however, certain other factors too which have to be noted. While this element has wide scope relative to Q_E in that in a large number of the positions in which it appears either it or its component members have DEs to which Q_E may attach itself, there are also certain restrictions it is required to observe in certain positions. Often, when it has been developed (along with postfixes and suffixes) from the Loc, Destin or certain of the Time nodes, neither it nor its head has a DE to which Q_E may attach itself. Thus in

274. murukan yaaḻppaaɳattil vaaḻntaan.

"Murukan lived in Jaffna." ,

while the entire underlined Loc phrase has a DE to which Q_E may attach itself, a procedure which will result in the question

275. murukan eɲkee vaaḻntaan?

"Where did Murukan live?" ,

the noun head of this phrase does not itself have such a DE, so that there can be no question

276. murukan etil vaaḻntaan?

"In what did Murukan live?"

corresponding to 274. (276 is not ungrammatical; it merely cannot be derived from 274.) Likewise, the NP head of the underlined Time phrase in

277. kantan viruntukkuḻuvin iRutiyil seytiyay aRivittaan.

"Kandan announced the news at the end of the party."

has no DE to which Q_E can attach itself, and there is no question

278. * kantan etil seytiyay aRivittaan?

[[At what did Kandan announce the news]].

While this is so, no simple generalization can be made to exclude such questions for, in the case of NPs dominated by Loc, a number of instances to which such a generalization would not apply are to be found. For example, in

279. tavaḻay kinaRRil vaaḻntatu.

"The frog lived in the well." ,

a sentence which in other fundamental syntactic respects exactly parallels 274, the noun head of the underlined Loc phrase does have a DE to which Q_E may attach itself to give

280. tavaḻay etil vaaḻntatu?

"In what did the frog live?"

Since in 274 the head of the Loc phrase is a Proper noun, while in 279 it is a Common noun, it might be surmised that the decision as to which items are excluded from the generalization and which are not must be based on the features of the noun head involved in each case. The investigation of further examples like the following, however, demonstrates that the facts do not support this surmise. In

281. murukan tanatu aluvalakattil vaaḻntaan.
"Murukan lived in his office."

the head noun of the underlined Loc phrase is a Common noun. Nevertheless, neither it nor the NP to which it belongs has a DE, so that 281 cannot, for instance, be related to the question 276. To complicate matters further, the same elements in Loc function in

282. murukan tanatu aluvalakattukku kiṭṭa viiṭṭayk kaṭṭinaan.
"Murukan built a house near his office."

have DEs to which Q_E may attach itself, so that a possible question relating to 282 is

283. murukan etaRku kiṭṭa viiṭṭayk kaṭṭinaan?
"Near what did Murukan build the house?" ,

which would result when Q_E attaches itself to the DE of the Loc NP. Such details appear to defy the establishment of definite lines of demarcation, for the restrictions appear to vary with the individual

uses of individual items. In the circumstances, the rules below will offer no final solutions to the problem, but will proceed as though in Loc and certain specified Time functions, NP, as well as its noun or pronoun head, can have no DE to which Q_E may attach itself. Such a course can be nothing but temporary, however, for it will cause certain of the questions of Tamil to remain ungenerated.

Also included within I^{DE} are Adj_n and AD_n (PS 60), which are respectively illustrated by

284. piḷḷay saappiṭukiRa maampaḻam mika passay (aakum).
"The mango the child is eating is very unripe."

and

285. pala teRkiḻakkaasiya naaṭukaḻukku paṇa utavi avasiyam (aakum).
"Financial aid is essential for many South-East Asian countries."

As PS 69 has indicated and 284 shows, these nodes may be expanded into an Intensifier followed by the head word. When this happens, Q_E may attach itself to the DE either of the Intensifier or of the entire phrase. (The latter is the DE of the head word taken by itself too.) If, for example, it attaches itself to the DE of the Intensifier in 284, the resulting question is

286. piḷḷay saappiṭukiRa maampaḻam evvaḻavu passay (aakum)?
"How unripe is the mango the child is eating?" ,

while if it attaches itself to the DE of the entire phrase, the resulting question is

287. pi||ay saappi|ukiRa maampa|am eppa|iyaakum?

"How is the mango the child is eating?"

It will be observed from 287 that the DE of the entire phrase does not retain a representative of the Intensifier.

The precise shape of the DEs of Adj_n and AD_n is not certain. In some cases it could be Prot.Part. ^ -pa|i "in $\begin{Bmatrix}\text{this}\\\text{that}\end{Bmatrix}$ way" , in other cases it could be Prot.Part. ^ -nna "$\begin{Bmatrix}\text{this}\\\text{that}\end{Bmatrix}$ (thing)", and in yet other cases, as when passay in 284 translates "green", no suitable item seems to be isolable. This, then, will be yet another problem that the rules below will find themselves unable to account for.

Finally, included within I^{DE} are various of the embedded sentences, and Quotat. To illustrate the latter first, if Q_E attaches itself to the DE of the Quotat in

289. kantan murukan tannay eemaaRRinaan enRaan.

"Kandan said that Murukan had tricked him." ,

the resulting question will be

290. kantan ennavenRaan?

"What did Kandan say?"

The embedded sentences which have DEs are the nominalized sentences consisting of sentences embedded by Ts 37, 38, 39 and 40,

and certain of the adverbialized sentences, those embedded by Ts 19 and 24. For example, the class of sentences embedded in SA position by T 37 in producing sentences like

291. talayvar uṇarssiyay eḻuppukiRa peessay muṭintataRkup pin elloorum maunamaay iruntaarkaḷ.
"Everyone remained silent after the leader ended his stirring speech."

has a DE to which Q_E may attach itself. In this particular case, the resulting question will be

292. etaRkup pin elloorum maunamaay iruntaarkaḷ?
"After what did everyone remain silent?"

It must be pointed out that in sentences like 291 the embedded sentence is part of an Adverbial phrase which itself in its entirety has a DE to which Q_E may attach itself. In terms of the discussion of Adverbial above, if the DE of the entire Time Adverbial class illustrated by 291 has Q_E attaching itself to it, the resulting question will be

293. eppoḻutu elloorum maunamaay iruntaarkaḷ?
"When did everyone remain silent?"

T 53 Attachment of Q_E

$Q_E - X - I - Z \Rightarrow$

$X - Q_E \hat{} I^{DE} - Z$

where I^{DE} / $\left\{\begin{array}{l}(\text{Qual})\ \left\{\begin{array}{l}\text{N}\\\text{Pron}\end{array}\right\}\\\text{Adverbial}\\\text{Emb S}\\\text{Quotat}\\\text{AN}\end{array}\right\}^{DE}$

Adverbial / $\left\{\begin{array}{l}\text{Time} \not< \left\{\begin{array}{l}\text{Measure, } T_{AD},\\\text{Sim } A_2 \text{ or Sub } A_2\end{array}\right\}\\\text{Manner} \not< \text{Man Condi}_{\not<}^{\text{or}} \text{ Represen}\\\text{Recip} \not< \text{Comm, Conclu}_{\not<}^{\text{or}} \text{ Rec}\\\text{Loc}\\\text{Purpose}\\\text{Reason}\end{array}\right\}$

Emb S / S embedded by T 19, 24, 37, 38, 39 or 40.

AN / $\left\{\begin{array}{l}\text{Adj}_n\\\text{AD}_n\end{array}\right\}$

$\left\{\begin{array}{l}\text{N}\\\text{Pron}\end{array}\right\} \not<$ Loc, Destin or Time if Qual is not chosen

The last of the structural conditions on T 53 requires to be explained. It will be recalled from the discussion of 274 to 283 that in Destin, Loc and certain Time positions neither NPs nor their noun or pronoun heads have DEs to which Q_E may attach itself. While this is so, it is possible for the Qualifiers of nouns or pronouns in these positions to have such DEs. The last of the structural conditions on T 53 provides for the indication of this fact by specifying that Q_E can attach itself to NPs in the functions referred to only if their heads carry Qualifiers. This prepares the way for the first of the incorporation transformations below to indicate that in these functions Q_E must obligatorily attach itself to a Qualifier taken by the heads of these NPs.

This first incorporation transformation shares certain important features with the second incorporation transformation below. These features are as follows. The Qualifier to which Q_E attaches itself cannot be Selec, which as a whole has no DE. Q_E can attach itself to only a single sub-class of Qual on any given occasion. Qual itself as a major inclusive class does not have a DE. The rules below will account for the last two facts mentioned by setting up two elements X and Y on either side of the Qualifier questioned. These will represent all other Qualifiers which may precede or follow the Qualifier questioned. This Qualifier may of course be the first or the last possible in the complex, so that X and Y may also be null. The rules will also indicate that certain

Qualifier sub-classes which have DEs to which Q_E can attach itself belong to more inclusive sub-classes which themselves as wholes have such DEs. They will do so by listing all the Qualifier elements, whether they include other elements or not, which have DEs.

To proceed from the similarities between the two incorporation transformations under discussion to their differences, the second of them will account for the incorporation of Q_E into all NPs not specifically dealt with by the first. It will do this by means of two rules. The first of these will indicate that where a NP to whose DE Q_E has been attached by T 53 consists of a noun or pronoun head preceded by an embedded sentence (whether developed from S, Descrip, Equat or Poss) as Qualifier, Q_E may optionally be transferred to the DE of this head. The kind of question it will account for is 264, which retains the Qualifier while questioning the head it qualifies.

The second of the rules under discussion will indicate that where a NP to whose DE Q_E has been attached by T 53 consists of a noun or pronoun head preceded by one or more Qualifiers, Q_E may optionally be transferred to the DE of any one of the Qualifiers. Among the strings this rule operates on will be some which had qualified for entry into the rule discussed immediately above, but which had opted not to enter it. The kind of question this rule accounts for is illustrated by 261.

The reason why the rule just discussed is optional is that it helps to account for the point mentioned earlier on that a NP as a whole, whether its head noun or pronoun takes Qualifiers or not, has a DE to which Q_E can attach itself. T 53 has already attached Q_E to the DE of NP, and the incorporation rule under discussion has merely to indicate that under certain conditions this Q_E may, as a matter of choice, be transferred to the DE of any Qualifier taken by the head of a given NP. Strings which qualify for entry into this rule but which opt not to enter it are those which underlie such questions as 260 and 263.

T 54 Incorporation of Q_E : Restricted Nominals

$$W - Q_E \wedge \underline{X - QL - Y - NO}^{DE} - Z \Longrightarrow$$

$$W - X - Q_E \wedge QL^{DE} - Y - NO - Z$$

where $X \ldots NO \leftarrow \left\{ \begin{array}{l} \text{Loc} \\ \text{Destin} \\ \text{A} \leftarrow \text{Time} \end{array} \right\}$

$$QL \; / \left\{ \begin{array}{l} \text{S} \\ \text{Attrib} \\ \text{Descrip} \\ \text{Equat} \\ \text{Poss} \\ \text{Demons} \\ \text{Num} \\ \text{Ordinal} \\ \text{Adj} \\ \text{Intensif} \end{array} \right\}$$

$$\begin{Bmatrix} X \\ Y \end{Bmatrix} \quad / \quad \text{Any Qual excluded from QL, or null}$$

$$NO \quad / \quad \begin{Bmatrix} N \\ Pron \end{Bmatrix}$$

T 55 (Optional) Incorporation of $\underline{Q_E}$: Unrestricted Nominals with Embedded Sentences as Qualifiers

$$W - Q_E \hat{} \underline{QL - NO}^{DE} - Z \Rightarrow$$

$$W - QL - Q_E \hat{} NO^{DE} - Z$$

where $QL - NO \not\leftarrow \begin{Bmatrix} Loc \\ Destin \\ A \leftarrow Time \end{Bmatrix}$

$$QL \quad / \quad (S)\ (Attrib)$$

$$NO \quad / \quad \begin{Bmatrix} N \\ Pron \end{Bmatrix}$$

T 56 (Optional) Incorporation of $\underline{Q_E}$: Unrestricted Nominals-General

$$W - Q_E \hat{} \underline{X - QL - Y - NO}^{DE} - Z \Rightarrow$$

$$W - X - Q_E \hat{} QL^{DE} - Y - NO - Z$$

where $X...NO \not\leftarrow \begin{Bmatrix} Loc \\ Destin \\ A \leftarrow Time \end{Bmatrix}$

$$QL \quad / \quad \left\{\begin{matrix} S \\ Attrib \\ Descrip \\ Equat \\ Poss \\ Demons \\ Num \\ Ordinal \\ Adj \\ Intensif \end{matrix}\right\}$$

$$\left\{\begin{matrix} X \\ Y \end{matrix}\right\} \quad / \quad \text{Any Qual excluded from QL, or null}$$

$$NO \quad / \quad \left\{\begin{matrix} N \\ Pron \end{matrix}\right\}$$

The next two incorporation rules will formalize the points made above about the two Adverbial sub-classes, $\underline{(Qual) \hat{} M_a}$ and $\underline{M_{Adv}}$. As will be seen, these rules share certain features with the incorporation rules already discussed.

T 57 Incorporation of $\underline{Q_E}$: Manner Adverbial 1

$$W - Q_E \hat{} \underline{X - QL - Y - M_a}^{DE} - Z \Rightarrow$$

$$W - X - Q_E \hat{} QL^{DE} - Y - M_a - Z$$

where $QL \quad / \quad \left\{\begin{matrix} S \\ Attrib \\ Descrip \\ Equat \\ Poss \\ Demons \\ Num \\ Ordinal \\ Adj \\ Intensif \end{matrix}\right\}$

$\left\{\begin{matrix} X \\ Y \end{matrix}\right\}$ / Any Qual excluded from QL, or null

T 58 (Optional) Incorporation of $\underline{Q_E}$: Manner Adverbial 2

$$W - Q_E \hat{} \underline{\text{Intensif - } M_{Ad}}^{DE} - Z \Rightarrow$$

$$W - Q_E \hat{} \text{Intensif}^{DE} - M_{Ad} - Z$$

The last of the incorporation rules formalizes the points made in the discussion of the behaviour of the elements $\underline{Adj_n}$ and $\underline{AD_n}$ in relation to $\underline{Q_E}$.

T 59 (Optional) Incorporation of $\underline{Q_E}$: AN

$$W - Q_E \hat{} \underline{\text{Intensif - A}}^{DE} - Z \Rightarrow$$

$$W - Q_E \hat{} \text{Intensif}^{DE} - A - Z$$

where $\underline{\text{Intensif - A}}^{DE}$ / AN^{DE}

Of the two sub-classes developed from $\underline{Q_{AA}}$ in PS 76, only the first, $\underline{Q_{aa}}$, will be dealt with below. $\underline{Q_{aa}}$ attaches itself to a variety of major nodes to (generally) convert the statements they

occur in into questions requiring the answer oom "yes" or illay "no". The rule which accounts for this will bring the various items to which Q_{aa} may be attached under a single inclusive label I. In every case, Q_{aa} will follow the element to which it is attached.

I comprises five major elements. The first of these is the NP with a noun or pronoun head. The operative NP is largely unrestricted as to its syntactic function. The major restriction it does have to observe is that it cannot belong to an embedded sentence, with one exception. (This in fact is a general restriction on all the elements covered by I.) To illustrate the general restriction before going on to the exception, the subject NP (underlined) of the embedded sentence in

294. peeraasiriyar puttakattay kaɳṭitta piRaku kuɳam atan kuRRaŋkaḷay suṭṭi eḷutinaan.
"After the Professor had condemned the book, Gunam wrote pointing out its defects."

cannot take Q_{aa}, so that there is no question

295. * peeraasiriyaraa puttakattay kaɳṭitta piRaku kuɳam atan kuRRaŋkaḷay suṭṭi eḷutinaan?

corresponding to 294. The exception to the restriction just illustrated is that if a NP in an embedded sentence belongs to a Quotat it may have Q_{aa} attached to it. This is demonstrated by

296. saaṭsikkaaran kuRRaṇsaaṭṭappaṭṭavanaa awanukku aṭittaan enpatay maRantaan.

"The witness had forgotten whether it was the accused who had hit him."

In all such instances, as is to be expected from the fact that the Quotative Verb is invariably involved, the resulting string will have a factive flavour, and will not be a question.

The restriction discussed above apart, Q_{aa} may be attached to a NP in any syntactic function. When Q_{aa} is attached to a NP, whatever elements the head noun or pronoun of this NP takes before or after it, it questions the entire phrase and not any of these parts of it in isolation. Thus in

297. nitiamayssarin atikak koṭumayaana naṭavaṭikkayka] vevveeRa attiyavasiya uṇavupporu]ka]in vilayil vii]ssi uṇṭaakkina.

"The Finance Minister's very stern measures brought about a fall in the prices of various essential items of food." ,

the subject NP (underlined once), the Cont phrase (underlined twice) or the Object NP (underlined thrice) may be questioned in its entirety by Q_{aa} being attached to it. To illustrate only the first of these, the question that will result from the attachment of Q_{aa} to the subject NP of 297 is

298. nitiamayssarin atikak kaṭumayaana naṭavaṭikkaykaḷaa vevveeRa attiyavasiya uṇavupporuḷkaḷin vilayil viiḷssi uṇṭaakkina?

"Was it the Finance Minister's very stern measures that brought about a fall in the prices of essential items of food?"

None of the Qualifiers taken by the heads of the first two NPs in 297 can, however, so be questioned. Among the elements within NP thus barred from taking Q_{aa} is Intensif. A special note will be made later about the behaviour of this particular element in relation to Q_{aa} .

When Q_{aa} is attached to a NP that is the subject of the V_{Pos} , aaka, or the Complement of a copulative string whose verb is $V_{Cop\ Iden}$, the verb is obligatorily deleted. This change, which is illustrated by

299. murukan oru kaliyaaṇattarakanaa?

"Is Murukan a marriage-broker?" ,

will be attended to by a later deletion rule (T 95).

The second element covered by I is the verbal complex. The verbal complex too is required to take Q_{aa} as a whole. This apart, there are two restrictions it is required to observe when taking Q_{aa} . One is the general restriction on elements taking Q_{aa} which prevents them from occurring in embedded sentences except as

members of Quotat. The second is that it cannot contain an Optative Modal. The kind of question which is formed when Q_{aa} is attached to the verbal complex is illustrated by

300. soompeeri veelay seyyaamal paṭuttiruntaanaa?
"Was the lazy fellow sleeping instead of working?"

The third element included within I is the embedded sentence considered as a single unitary whole. There are two kinds of embedded sentence to which Q_{aa} cannot be attached. One is a sentence which has been embedded by an Adjectivalization transformation, and the other is a sentence embedded by the Conditional Adverb transformation (T 27) which has chosen the optional suffix -um that that transformation had introduced. All embedded sentences other than these can have Q_{aa} attached to them, subject to the general condition on the rule referred to above. The kind of question which results when this happens is illustrated by

301. kuṇam puttakattay vaasikkaamal atay kaṇṭippataa nampikkay vaaynta vimarsakarkaḷukku koopam uuṭṭiyatu?
"Was it Gunam's comdemning the book without reading it that angered the honest critics?" ,

where the questioned sentence has been embedded by the General Nominalization transformation (T 37). If any embedded sentence that Q_{aa} is attached to takes any particles or affixes after it, Q_{aa}

is required to follow them, as is demonstrated by

302. murukan paṉakkaaran aana piRakaa paḻaya naṉparkaḻay ikaḻntaan?
"Was it after Murukan became rich that he scorned his old friends?" ,

where the phonological exponent of Q_{aa} is attached after the particle piRaku which follows the sentence embedded by the Subsequent Action 1 transformation (T 17).

The fourth element covered by I consists of two items, Adj_n and AD_n , both developed from Comp. The questioning of these two items by Q_{aa} is illustrated in turn by

303. kantan koṉsam kaṯṯayaa?
"Is Kandan somewhat short?"

and

304. kantanukku tanatu manayvin utavi atika avasiyamaa?
"Is his wife's help very necessary for Kandan?"

Two points to be made about such questions are firstly, the whole phrase concerned must be questioned by means of Q_{aa} , which cannot attach itself to the Intensifier the phrase can contain, and secondly, the $V_{Cop\ Iden}$ which follows Adj_n or AD_n as the case may be is obligatorily deleted. This last point will be attended to by a later deletion rule (T 95). These two items too have to observe the general condition described above on the Q_{aa} rule.

While the first three elements described above account for most of the Adverbials to which Q_{aa} can be attached, there are still a few such Adverbials which remain to be provided for. These Adverbials, which make up the fifth element covered by I, ADV, are T_{AD}, MA, and certain of the elements developed from Loc and Dest by PSS 26 and 27, viz. L_{Adv}, $L_1 \hat{} LM$ and $L_1 \hat{} DM$.

305. pi‖‖ay koɲsamaa a‖utaan?

[[Was it a little that the child cried]]

illustrates the kind of question which results when MA, for example, has Q_{aa} attached to it. 305 is of added interest because in it, it is the sub-class Intensif of MA that is questioned. This in fact is the only environment in which Q_{aa} can be attached to Intensif, for, as stated earlier, when this element occurs as a Qualifier of a noun, or as a modifier of an Ad, an Ad_n or an A_n, Q_{aa} cannot be attached to it. The point made earlier about the restriction on Q_{aa} being attached to elements in embedded sentences applies equally to the ADV elements.

T 60 Attachment of Q_{aa}

$Q_{aa} - W - I - Z \Rightarrow$

$W - I \hat{} Q_{aa} - Z$

where

$$I \;/\; \left\{\begin{array}{l} (\text{Qual}) \left\{\begin{matrix}\text{N}\\ \text{Pron}\end{matrix}\right\} (\text{case}) \; (\text{postfix}) \\ \text{VB (Modif)} \\ \text{Embedded S (X)} \\ \text{AN} \\ \text{ADV} \end{array}\right\}$$

I does not belong to an embedded sentence unless it is part of Quotat

Modif $\not\in$ Optat

Embedded S $\not/$ S embedded by T 41, 42, 43, 44, 46, 47 or 48

X / Suffix, postfix or particle $\not/$ -um introduced by T 27

$$\text{AN} \;/\; \left\{\begin{matrix}\text{Adj}_n \\ \text{AD}_n\end{matrix}\right\}$$

$$\text{ADV} \;/\; \left\{\begin{array}{l} \text{T}_{\text{AD}} \\ \text{MA} \\ \text{L}_{\text{Adv}} \\ \text{L}_1 \left\{\begin{matrix}\text{LM}\\ \text{DM}\end{matrix}\right\} \end{array}\right\}$$

In a number of instances when case inflections were the primary markers of the syntactic functions of the nominals they were attached to, they had been introduced and specified by the PS rules. There are other instances, however, in which case inflections are purely surface items, taken by nominals as as automatic consequence of their cooccurrence with certain postfixes. The next set of rules assign such automatic case markers to nominals in specified contexts.

Certain postfixes developed from Dest and Loc require the nominals they are attached to to take either the dative or the possessive case suffix. This is true of the L_1 postfix meel developed from Dest, for example, as is demonstrated by

306. pi||ay meesay{-in / -kku} meel eeRinaan.
"The child climbed on top of the table."

Some of these postfixes may themselves take case markers (covered by DM and LM in the PS rules) after them, and these sometimes vary according to the case markers assigned to the preceding nominal. Such details, many of which are a matter for the morphophonemic rules to attend to, will not be dealt with here.

T 61 Assignment of Case Suffixes - 1

$$W - Nom - postfix - Z \Rightarrow$$

$$W - Nom \hat{} \left\{\begin{matrix} dat.c \\ poss.c \end{matrix}\right\} - postfix - Z$$

$$\text{where} \quad postfix \quad / \quad \left\{\begin{matrix} \underline{ul},\ \underline{veli},\ \underline{kiil},\ \underline{meel}, \\ \underline{mun},\ \underline{pin},\ \underline{matti} \text{ or } \underline{naṭu} \end{matrix}\right\} \leftarrow L_1$$

$$Nom \quad / \quad (Qual) \left\{\begin{matrix} N \\ Pron \end{matrix}\right\}$$

The next rule deals with postfixes in whose environment the preceding nominal has to be assigned the dative case marker. An example of such a postfix is the Limit postfix ul, as is shown by

307. teervu oru maṇittiyaalattiRkuḷ muṭintatu.

"The examination finished within an hour."

T 62 Assignment of Case Suffixes - 2

W - Nom - postfix - Z ⇒

W - Nom ^ dat.c - postfix - Z

where postfix / { iṭay or kiṭṭa ← L_1 ; Prot.P {puram / paal} ← L_2 ; mun, pin or piRaku ← Time ; ul ← Limit ; meel ← Durat ; aaka ← Substit }

Nom / { (Qual) {N / Pron} ; S nominalized by T 37 }

A comparison of Ts 61 and 62 will reveal that certain homonymous postfixes like mun (Time) and mun (L_1) cause different case endings to be assigned to the nominal preceding them depending on their function. A further point revealed by the comparison is that in T 62 Nom can be either a nominalized sentence or a phrase with a noun or pronoun head. This point is true of the next two rules too.

T 63 deals with those postfixes in whose environment the preceding nominal is assigned the possessive case marker. The kind of feature it accounts for is illustrated by

308. kantan tɛ̀ɭilaaɭarkaɭin saarppil piratamarooṭu parintu peesinaan.
"Kandan interceded with the Prime Minister on behalf of the workers."

T 63 Assignment of Case Suffixes - 3

W - Nom - postfix - Z ⇒

W - Nom ^ poss.c - postfix - Z

where postfix / { miitu ← {L2 / Cont}
meel ← {Cont / Limit}
poruṭṭu, nimittam, muulam,
viɭayvaaka or saarpp{-il / -aaka} }

Nom / { (Qual) {N / Pron}
S nominalized by T 37 }

The last of the Case Assignment rules, which assigns the accusative case marker to nominals preceding the Topic postfixes, accounts for the inflection of the underlined noun in

309. ilikitar tanatu naaḷaantara veelayil maaRRamillaata vaḷakkattayp paRRi salipputan peesinaar.

"The clerk spoke with boredom about the unvarying routine of his daily work."

T 64 Assignment of Case Suffixes - 4

W - Nom - postfix - Z ⇒

W - Nom ^ acc.c - postfix - Z

where postfix / paRRi, •ṭṭi or sampantamaaka

Nom / { (Qual) { N / Pron } / S nominalized by T 37 }

The next two rules are also devoted to certain automatic processes. The first of them converts any verb or Aspectival immediately preceding the Antic or Futur Aspectival, the passivizing particle paṭu, or the Jussive, the Possib or a Poten Modal into the infinitival form, while the second converts any verb or Aspectival immediately preceding any one of the rest of the Aspectivals into the past participial form. (Illustrations of these processes have already been provided, during the discussion of the items listed in the PS rules.) These rules have to precede the Concord rules because it is necessary to specify in the latter that verbal elements take concordial inflections only in their finite forms.

T 65 Conversion of Verbal Elements to Infinitive

W - VA - Modif - Z ⇒

W - VA ^ Inf. - Modif - Z

where VA / {VB, Aspectival}

Modif / {Antic, Real, Futur, Possib, Jussive, Poten or patu (passivizing particle)}

T 66 Conversion of Verbal Elements to Past Participle

W - VA - Modif - Z ⇒

W - VA ^ Past ^ Part. - Modif - Z

where VA / {VB, Aspectival}

Modif / {Reten, Complet, Contin, Progres, Conclu or Perf}

The assignment of concord features to various elements in strings is also an automatic process. Automatic concord elements are assigned in Tamil to two kinds of element, verbs and auxiliaries on the one hand, and nominals developed from Comp on the other. The present work will confine its attention to the former. The rules it provides will themselves have to be further supplemented once the

Conjunction transformations, which are excluded from the present work, are worked out.

A major morphological feature distinguishing Irregular Impersonal verbs and Modals from other verbal elements is that the former do not take concordial inflections of gender, number and person as the latter do. While this is so, only two of them, the Optat and Subjunc Modals, may be said not to inflect at all. All the others take in most contexts a neutral inflection, -um or -atu. The Possib Modal, in its positive form, can take only the first of these, and then too the u of -um is elided. The two forms of the neutral inflection are phonologically identical with forms of the Third Person Neuter inflection taken by other verbal elements in the appropriate contexts, but since they do not, like the latter, contrast with other gender, number and person inflections, they cannot be designated the same as these, and will, therefore, be treated as separate units.

The only members of the group which take the neutral inflection in all instances of their occurrence are the Possib Modal and the Irregular Impersonal verb kaaṉum "be enough". The latter, for example, takes the inflection even when it precedes the Conjunctive Participle, as it does in

310. siRaypiṭippavarkaḷ kaytikku kaaṉumaana uṉavu koṭukka villay.
"The captors did not give the prisoner sufficient food."

On the other hand, the Irregular Impersonal verb takum "be sufficient" cannot at all take the inflection in the environment of the Conjunctive Participle, where it invariably assumes a Past Participle-like form, as in

311. sama santarppam inmayin kaaraṇattinaal pala makkaḷukku takunta vaaḻkkayay vaaḻa muṭiyaatu.
"Because of the inequality of opportunity, many people are unable to lead the lives they are suited to."

In other contexts, however, it takes the neutral inflection.

As far as the rest of the verbal elements in the group under discussion are concerned, there is one environment in which they may take the neutral inflection optionally, and this is when they are immediately followed by the Conjunctive Participle. When the verbal element involved is the Jussive or a Poten Modal, a further narrowing of this environment is necessary. It will be remembered that when a sentence is embedded as a Qualifier of a nominal in another sentence, a major condition on the operation is that the embedded sentence contains a nominal that is identical with the nominal qualified. The transformation deletes this nominal from the sentence it embeds. Where the verb in a sentence that has been so embedded takes the Jussive or a Poten Modal, this Modal can be assigned the neutral inflection only if the nominal deleted by the Adjectivalization rule had been in Object function. Thus while

generally the Modal in embedded sentences of this kind will not take the neutral inflection, assuming the form illustrated by

312. ivay taan murukanaal seyyakkuuṭiya kaariyaŋkaḷ aakum.
"These are the things that Murukan can do." ,

if the conditions described above are met, it may do so, as demonstrated by the alternative form of 312,

313. ivay taan murukanaal seyyakkuuṭumaana kaariyaŋkaḷ aakum.

In environments other than those discussed, unless they are followed by a participial form that is not an Adverbial Participle, the verbal elements under consideration are obligatorily assigned the neutral inflection, an operation which results in sentences like

314. kantanukku mikat tiRamayaaka naṭikkak kuuṭum.
"Kandan can act very well."

The rules below, while attending to the general features described above, will not indicate which of the two forms of the neutral inflection the verbal elements concerned will take, and in which contexts. This will be the task of a morphophonemic rule, which will indicate that when these elements take various tense-like inflections, as takum does in 311, the -atu form is chosen, and that in all other contexts, the -um form is chosen.

T 67 Concord : Irregular Impersonal Verbs and Modals

T 67.1 (Optional)

$$W - X \begin{bmatrix} \text{Irreg Imp Vb} \\ \text{Mod} \end{bmatrix} (\text{Tense}) - \text{Conj.Part.} - Z \Rightarrow$$

$$W - X \begin{bmatrix} \text{Irreg Imp Vb} \\ \text{Mod} \end{bmatrix} (\text{Tense}) \text{ Neutral} - \text{Conj.Part.} - Z$$

where Irreg Imp Vb $\neq$ $\left\{ \begin{matrix} \underline{\text{kaanum}} \\ \underline{\text{takum}} \end{matrix} \right\}$

Mod / $\left\{ \begin{matrix} \text{Poten} \\ \text{Jussive} \end{matrix} \right\}$

if X ^ Mod (Tense) has been embedded by T 42 or by T 44, then that transformation has deleted its Object NP.

T 67.2

$$W - X \begin{bmatrix} \text{Irreg Imp Vb} \\ \text{Mod} \end{bmatrix} (\text{Tense}) - Y - Z \Rightarrow$$

$$W - X \begin{bmatrix} \text{Irreg Imp Vb} \\ \text{Mod} \end{bmatrix} (\text{Tense}) \text{ Neutral} - Y - Z$$

where Mod / $\left\{ \begin{matrix} \text{Poten} \\ \text{Jussive} \\ \text{Possib} \end{matrix} \right\}$

X...(Tense) $\neq$ an embedded sentence

unless $\left\{ \begin{matrix} Y \text{ / Adv.Part. (A)} \\ \text{Irreg Imp Vb / } \underline{\text{kaanum}} \end{matrix} \right\}$

While verbal elements other than those just discussed are generally assigned gender, number and person inflections on the basis of the features of the nominals which are their subjects, there are certain instances in which this procedure does not take place. In one set of such instances, when the verbal element is immediately followed by any one of the participial forms or by the Infinitive, or when it has been nominalized, no gender, number or person inflection is assigned to it at all. On the other hand, there is a set of instances in which the verbal element is assigned not concordial inflections, but an ending -um, which, though identical in phonological shape with the Third Person Singular and Plural Neuter Future inflection, is best treated as a different unit. This ending occurs when the verbal element belongs to a sentence embedded by T 14 or T 21, and has already been assigned by the transformations referred to.

In all environments other than these the verbal element takes on inflections of gender, number and person that put it in concord with its subject. The rule which attends to this has, however, to be postponed until certain aspects of behaviour of the syntactic feature [Hon] (Honorific) have been accounted for. PS 72 has revealed that the feature [+ Hon] is assigned to Singular non-Neuter nouns and pronouns as an alternative to the features $[+ \begin{Bmatrix} \text{Masc} \\ \text{Fem} \end{Bmatrix}]$. When a pronoun or a common noun is assigned the feature [+ Hon], this fact is generally manifested by the phonological shape of its ending, as is demonstrated by

315. toḻilaaḻarkaḻin talayva[-n / -r] kuḻuvinarooṭu peessuvaarttaykaḻ naṭattinaa [-n / -r].

"The leader of the workers had talks with the Commissioners.",

where the -n ending of the subject noun marks the feature [+ Masc], and the -r ending the feature [+ Hon]. The Honorific ending taken by this noun is phonologically identical with one of the variant plural endings of nouns, that taken by the subject noun in

316. tamiḻar perumpaalaaka ilaŋkayin vaṭa maakaaṇattilum kiḻakku maakaaṇattilum vaaḻukiRaarkaḻ.

"The Tamils occupy mainly the Northern and Eastern provinces of Ceylon."

The two endings have, however, to be kept distinct, for the subject of 315 is clearly Singular, while the subject of 316 is clearly Plural, a fact which is rendered even more unambiguous by the Plural inflection of the verb in the latter.

Proper nouns are more complicated with regard to this matter than Common nouns. Often, when they are assigned the feature [+ Hon], there need be no change in their form, as is demonstrated by

317. kaṇapatipiḻḻay ollaantukku poonaa{-n / -r}.

"Kanapathypillai went to Holland." ,

where whether the subject Proper noun is Honorific or not is indicated solely by the concordial inflection assigned to the verb. The

morphophonemic rules which account for the forms of Honorific nouns will have no difficulty with this problem, for in this context they will allow the feature [+ Hon] to receive no overt phonological exponency. There is, however, a further problem relating to such nouns. When they are assigned the feature [+ Hon], they can, as an alternative to the mode of behaviour described above, take an ending which has the shape of the Third Person non-Neuter Plural pronoun after them. If they are in subject function, this will automatically result in their verbs being assigned the features which put them in concord with the Third Person non-Neuter Plural pronoun. This is illustrated by

318. kaɳapatipiḷḷay avarkaḷ ollaantukku poonaarkaḷ. ,

which translates as 317 does. Where the Proper nouns involved are Singular, as in 318, the verbs may subsequently have their Plural inflection replaced by the Singular Honorific inflection, so that an alternative form of 318 is

319. kaɳapatipiḷḷay avarkaḷ ollaantukku poonaar.

Second Person Singular pronouns which are assigned the feature [+ Hon] also call for special comment. When these pronouns are assigned this feature, they either become Plural or take on the Honorific suffix -r referred to earlier. This is illustrated by

320. [nii / niir / niiŋkaɭ] nanRaakap paṭutt [-aayaa / -iiraa / -iirkaɭaa] ?

"Did you sleep well?" ,

where the first alternative is non-Honorific, the second Honorific, and the third Plural and/or Honorific.

Finally, if the First Person Plural form used by editors, presidents of societies and so on is treated in terms of the feature [+ Hon] (as it is most useful to do), then the assignment of the feature to First Person Singular pronouns has the effect of converting them into the Plural, which in turn affects the concordial inflections assigned to the verb.

T 68 (Optional) Honorific : Proper Nouns

$$X - [\ +\ N, -\ Common, +\ Hon, \ldots] - Z \Rightarrow$$

$$X - [\ +\ N, -\ Common, \ldots] \hat{}\ [\ +\ Pron, +\ Thd\ P, -\ Neut, +\ Pl\ ] - Z$$

T 69 (Optional) Honorific : Second Person Pronouns

$$X - [\ +\ Pron, +\ Scd\ P, +\ Sg, +\ Hon, \ldots] - Z \Rightarrow$$

$$X - [\ +\ Pron, +\ Scd\ P, +\ Pl, \ldots] - Z$$

T 70 Honorific : First Person Pronouns

$$X - [\ +\ \text{Pron},\ +\ \text{Fst P},\ +\ \text{Sg},\ +\ \text{Hon},\ \ldots] - Z \Rightarrow$$

$$X - [\ +\ \text{Pron},\ +\ \text{Fst P},\ +\ \text{Pl},\ \ldots] - Z$$

Certain points regarding the Concord rule below require explication. One such point relates to the designated representatives of the elements which occur in subject position in strings which go through the $\underline{Q_E}$ transformation (Ts 53 to 56). It was pointed out during the discussion of those transformations that the verb in any question derived by their means takes on number, gender and person inflections which put it in concord with the subject question word. Furthermore, it was decided at that point that the designated representative of a nominal should be treated as consisting in part of a bundle of features from which the feature $[\ +\ \begin{Bmatrix}\text{Fst P}\\ \text{Scd P}\end{Bmatrix}\ ]$ was excluded. The rule below will account for these points by indicating that the subject of any string it operates on can, if it is not assigned the feature $[\ +\ \begin{Bmatrix}\text{Fst P}\\ \text{Scd P}\end{Bmatrix}\ ]$, be realized either as a nominal proper or as the designated representative of a nominal.

Two other points about the Concord rule which demand explication relate to sentences produced by the Passive transformation (T 9). It was mentioned during the discussion of that transformation that if the Object of the string undergoing it was a Quotat of the form $NP_{sub}\ \hat{}\ \text{Comp}\ \hat{}\ V_{\text{Cop Iden}}$, then the passivized verb must be assigned

inflections which put it in concord with the subject NP of that Quotat, whereas if it was a Quotat which was not of this form, then the whole Quotat must be treated as the subject of the passivized string, so that the verb merely acquires the Third Person Singular Neuter inflection. Again, it was mentioned during the discussion of T 9 that where the new subject of the passivized string was derived from Fact Obj, the verb must be assigned the Third Person Singular Neuter inflection. The rule below is so formulated as to account for these facts.

Finally, it is necessary to point out that the optional element A preceding the Third Person pronoun in the rule will, if chosen indicate that the pronoun is in fact the nominalizing element introduced by the General Nominalization transformation (T 37).

T 71 Concord : General

$$W - \begin{bmatrix} [+\text{Pron} \begin{bmatrix} +\text{Fst P} \begin{bmatrix} +\text{Sg} \\ +\text{Pl} \end{bmatrix} \\ +\text{Scd P} \begin{bmatrix} +\text{Sg}, \pm\text{Hon} \\ +\text{Pl} \end{bmatrix} \end{bmatrix} \\ \begin{bmatrix} [+\text{N}] \\ (\text{A})\,[+\text{Pron}, +\text{Thd P}] \end{bmatrix} [\begin{bmatrix} -\text{Count} \\ +\text{Sg} \begin{bmatrix} +\text{Masc} \\ +\text{Fem} \\ \begin{bmatrix} -\text{Anim} \\ +\text{Neut} \end{bmatrix} \\ +\text{Hon} \end{bmatrix} \\ +\text{Pl} \end{bmatrix}]^{(\text{DE})} \\ \begin{bmatrix} \text{Quotat} \\ \text{Fact Obj} \end{bmatrix} \end{bmatrix}_{\text{sub}} -$$

$$X - VB - (B)\ (\text{Tense}) - Y - Z \Rightarrow$$

$$W - \left[\begin{array}{l} \left[\text{+ Pron} \left[\begin{array}{l}\text{+ Fst P} \left[\begin{array}{l}\text{+ Sg}\\ \text{+ Pl}\end{array}\right]\\ \text{+ Scd P} \left[\begin{array}{l}\text{+ Sg, } \pm \text{ Hon}\\ \text{+ Pl}\end{array}\right]\end{array}\right]\right] \\ \left[\begin{array}{l}\text{[+ N]}\\ \text{(A) [+ Pron, + Thd P]}\end{array}\right] \left[\begin{array}{l}\text{- Count}\\ \text{+ Sg} \left[\begin{array}{l}\text{+ Masc}\\ \text{+ Fem}\\ \text{[- Anim}\\ \text{+ Neut]}\\ \text{+ Hon}\end{array}\right]\\ \text{+ Pl}\end{array}\right]^{(DE)} \\ \left[\begin{array}{l}\text{Quotat}\\ \text{Fact Obj}\end{array}\right] \end{array}\right]_{sub} -$$

$$X - VB - (B)\ (\text{Tense}) - \left[\begin{array}{l} \left[\begin{array}{l}\text{+ Fst P} \left[\begin{array}{l}\text{+ Sg}\\ \text{+ Pl}\end{array}\right]\\ \text{+ Scd P} \left[\begin{array}{l}\text{+ Sg, } \pm \text{ Hon}\\ \text{+ Pl}\end{array}\right]\end{array}\right] \\ \text{+ Thd P} \left[\begin{array}{l}\text{+ Sg, + Neut}\\ \text{+ Sg,} \left[\begin{array}{l}\text{+ Masc}\\ \text{+ Fem}\\ \text{+ Neut}\\ \text{+ Hon}\end{array}\right]\\ \text{+ Pl}\end{array}\right] \\ \text{+ Thd P, + Sg, + Neut} \end{array}\right] - Y - Z$$

where VB $\neq$ Irreg Imp Verb

$\left\{\begin{array}{l}Y\\ Z\end{array}\right\} \neq \left\{\begin{array}{l}\text{Participle}\\ \text{Inf}\\ \underline{\text{-um}}\end{array}\right\}$ ^ D

B / $\left\{\begin{array}{l}\text{Aspectival}\\ \underline{\text{patu}}\text{ (Passivizing particle)}\end{array}\right\}$

W...Y has not been nominalized

A / S embedded by T 37

The optional rule which accounts for the process illustrated by 319, that is, the replacement of the Plural inflection assigned by T 71 to verbs whose subjects are Proper nouns followed by the Honorific ending <u>avarka]</u> with the Singular Honorific inflection, can now be provided.

T 72 (Optional) <u>Replacement of Plural Concord Inflection</u>

$$W - [\ +\ N,\ -\ Common,\ \ldots]\ \hat{}\ [\ +\ Pron,\ +\ Thd\ P,\ -\ Neut,\ +\ Pl\ ] - \underline{\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad}_{sub}$$

$$X - VB - Y - [\ +\ Thd\ P,\ -\ Neut,\ +\ Pl\ ] - Z \Rightarrow$$

$$W - [\ +\ N,\ -\ Common,\ \ldots]\ \hat{}\ [\ +\ Pron,\ +\ Thd\ P,\ -\ Neut,\ +\ Pl\ ] - \underline{\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad}_{sub}$$

$$X - VB - Y - [\ +\ Thd\ P,\ -\ Neut,\ +\ Sg,\ +\ Hon\ ] - Z$$

It is only now, after the Concord rules, that the Deletion rules may be taken up. The reason for positioning them thus is that some of them at least delete the subjects of sentences under various conditions, and since the concordial inflections of verbs are most economically treated as automatic surface features dependent on their subjects, it is clear that the deletion of these subjects must follow the assignment of the inflections. Many of the Deletion rules delete

repeated items in strings produced by embedding transformations, but there are other kinds of string too on which they operate.

Among the items that are most frequently deleted is NP. Already, some of the earlier rules have effected the deletion of NP. in certain environments concurrently with the other changes they have carried out. The rules below will deal with the remaining instances in which NP may be deleted.

The general condition on the deletion of a NP in a transform consisting of a matrix and an embedded sentence is to be defined in terms of identity. In such a transform, a NP belonging to one of the component sentences may be deleted if it is identical with a NP in the other sentence. In terms of the strings produced by the rules as stated so far, the identity is required to be total; that is, the two NPs concerned must be realized by the identical lexical units developed from identical nodes (making allowance, of course, for the fact that in one case these nodes belong to an embedded sentence while in the other they belong to a matrix sentence) and taking identical inflections and postfixes if any, and they must have identical referents. In a complete grammar, however, the condition of total identity as just described will have to be modified somewhat. The modification would be made necessary by changes introduced by the Pronominalization rules, which, in a complete grammar, would precede the Deletion rules. These Pronominalization rules would apply to (among others) just the kind of string which is described above as qualifying for entry into the Deletion rules. The major change they would make

in each such string is the replacement of all but one (generally the first) of the identical NPs in it with the appropriate pronominal forms. The significance of this change for the identity condition under discussion is that the Deletion transformation will apply not only to strings like

321. visaaraṇaykkuḷuvin aṅkattavarkaḷ oruvarooṭoruvar iṇaṅkaatirunta paṭiyaal visaaraṇaykkuḷuvin aṅkattavarkaḷ vivarattay virayvaaka veḷiyiṭavillay.

[[Because the members of the Commission of Inquiry were not agreed among themselves, the members of the Commission of Inquiry did not release the report early]] ,

produced by the embedding transformation of Reason (T 25), but also to strings like

322. visaaraṇaykkuḷuvin aṅkattavarkaḷ oruvarooṭoruvar iṇaṅkaatirunta paṭiyaal avarkaḷ vivarattay virayvaaka veḷiyiṭavillay. ,

produced by subjecting 321 to a Pronominalization rule which has replaced the NP visaaraṇaykkuḷuvin aṅkattavarkaḷ "the members of the Commission of Inquiry" on its second occurrence with the pronoun avarkaḷ "they". In either case the resulting will be

323. visaaraṇaykkuḷuvin aṅkattavarkaḷ oruvarooṭoruvar iṇaṅkaatirunta paṭiyaal vivarattay virayvaaka veḷiyiṭavillay. ,

which translates as 322 does. The rules below will, for the sake of

accuracy, have to assume that some at least of the strings they operate on would previously have undergone the Pronominalization transformation, and this means that they will have to interpret the identity condition as accomodating not elements of the kind described on p. 447, but also, provided all the other conditions are met, replacive pronominal forms of the kind illustrated by 322.

Apart from the general identity condition, there are certain more specific conditions too which any string which is subjected to the Deletion rule under discussion is required to satisfy. One of these concerns the nature of the embedding transformation by means of which the string has been derived, and the function of the operative NPs in it. If the source string has been produced by an Adjectivalization transformation, the identity of a NP in the embedded sentence with a NP in the matrix will not by itself be sufficient grounds for deleting either of them, In addition to their identity, the NPs involved will be required to be in subject function in the component sentences. Thus

324. <u>ilaṉkay taan</u> uRpattiseykiRa rapparay anniya naaṭukaḷukku eeRRumatiseykiRatu.

"Ceylon exports the rubber she produces to foreign lands."

(which, it must be noted, has previously passed through a Pronominalization rule) may, for example, be subjected to the Deletion rule under discussion because it meets these conditions. The sentence which will

result from this procedure is

325. ilaŋkay, uRpattiseykiRa rapparay anniya naaṭukaḷukku eeRRumatiseykiRatu.

The comma in 325 indicates that in speech a characteristic intonation contour which has the effect of separating the subject from the rest of the sentence will be introduced on the deletion of the NP.

The condition discussed in the previous paragraph automatically excludes strings produced by the Equational and the Possessive transformations (Ts 47 and 48) from the Deletion rule under discussion, since these transformations have already deleted the subject NP in the sentences they have embedded. Strings produced by the Descriptive transformation (T 46) are also excluded from the Deletion rule, which will incorporate a structural condition to this effect.

A second specific condition that any string undergoing the Deletion transformation under discussion is required to observe is that if one of the two identical NPs in it belongs to a nominalized sentence, then this nominalized sentence should have been developed from an Adverbial node. Thus

326. <u>poorviiran</u> <u>taan</u> etiriyin siRayiliruntu tappiyooṭuvatay vivarittaan.

"The soldier described his escape from the enemy prison."

does not qualify for entry into the Deletion rule, the identity

(in the sense defined above) of the underlined NPs notwithstanding.

327. peRRoor saattirakkaraniṯamiruntu yoosanayk keeṯṯuvataRku mun peRRoor taŋkaḷuṭaya makanin kaliyaaṇattukku iṇaŋka maaṯṯaarkaḷ.

[[Before the parents have consulted an astrologer, the parents will not agree to their son's marriage]] ,

however, in which the nominalized sentence which contains the first of the two identical nominals is in Pre Act function, does, and the sentence which results when it undergoes the Deletion transformation is

328. peRRoor saattirakkaaraniṯamiruntu yoosanayk keeṯṯuvataRku mun taŋkaḷuṭaya makanin kaliyaaṇattukku iṇaŋka maaṯṯaarkaḷ.

Generally, the NP deleted can belong to either of the constituent sentences of the string operated on. If, however, the NP deleted has a noun and not a pronoun head, then the one retained too is required to have a noun head.

Where the operative NPs in a string which qualifies for entry into the Deletion rule are not in subject function in their respective constituent sentences, the transformation applies optionally, and in fact often does not take place because the resulting string could be awkward. When it does take place, the NP which is retained is transferred to initial position in the string. In speech, the transference is accompanied by the introduction of a characteristic

intonation curve after the item transferred which has the effect of keeping it somewhat apart from the rest of the string. An example of a string which has undergone the change just described is

329. aḷutirunta piḷḷaykku, ammaa aaRutal aḷitta pin oru inippay koṭuttaaḷ.

"After comforting the child who was crying, his mother gave him a sweet."

A final point of relevance to the rules to be formulated below concerns strings in which the embedded sentence is of the sub-pattern NP ^ Comp ^ Copula Verb. Where, in such strings, the identical NPs are developed from Comp, different operations take place in the Deletion transformation from those described above. This, combined with the fact that non-NP elements developed from Comp may also function as the operative identity element, entails the exclusion of strings of this kind from the rule below which deletes non-subject NPs. (More will be said about this kind of string during the discussion of the rules which delete verbal complexes.) They are not, however, excluded from the rule which deletes subject NPs, for in this matter they behave in the same way as the strings already discussed, as is demonstrated by

330. piḷḷay muḷu vaḷarssi aṭayntavan (aavatu) poola tiṭamaaka katayttaan.

"The child spoke positively, as if he were an adult."

T 73 Deletion of Subject NPs of Constituent Sentences of Strings Produced by Embedding Transformations

$$W - NP_{1sub1} - X - NP_{2sub2} - Z \Rightarrow$$

$$W - \left\{ \begin{matrix} NP_{1sub1} - X \\ X - NP_{2sub2} \end{matrix} \right\} - Z$$

where either NP_1 or NP_2 belongs to a sentence which has been embedded by any transformation other than T 46, and which, if it has been nominalized, is dominated by an Adverbial node

the NP deleted / (Qual) N only if the NP retained / (Qual) N

$$NP_1 = NP_2$$

T 74 (Optional) Deletion of Non-Subject NPs of Constituent Sentences of Strings Produced by Embedding Transformations

$$W - NP_1 \hat{} case_1 (postfix_1) - X - NP_2 \hat{} case_2 (postfix_2) - Z \Rightarrow$$

$$\left\{ \begin{matrix} NP_1 \hat{} case_1 (postfix_1) \\ NP_2 \hat{} case_2 (postfix_2) \end{matrix} \right\} - W - X - Z$$

where either NP_1 or NP_2 belongs to a sentence which has been embedded by a non-Adjectivalization transformation, and which, if it has been nominalized, is dominated by an Adverbial node

the NP deleted / (Qual) N only if the NP retained / (Qual) N

$$NP_1 \hat{} case_1 (postfix_1) = NP_2 \hat{} case_2 (postfix_2)$$

The deletion of verbal complexes (and their expansions) in strings derived by means of embedding transformations is accompanied by certain other changes in them. Here too the basic condition of identity (with certain qualifications that will be described later) must be met, but there are certain additional restrictions. For instance, it is required that the verbal complex to be deleted must belong to a sentence dominated by one of a few select nodes, viz. Pre Act (PS 10), Sub A_1 (PS 13), Neut Act (PS 10) and Man Comp (PS 36). The other restrictions vary depending on which of these nodes the embedded sentence to which the verbal complex to be deleted belongs is dominated by. These restrictions are such as to require the deletion operation to be carried out by three different rules.

The first rule deletes verbal complexes and their expansions from sentences dominated by either Pre Act or Sub A_1 . In addition to the conditions already stated, it requires the strings on which it operates to satisfy the following conditions. These strings should, if they had qualified to do so, have already passed through the Deletion rules Ts 73 and 74. There should be one NP in the embedded sentence (this will be referred to as the operative NP below) which, whatever its function, is derived from the identical immediate node as a NP in the matrix. These two NPs will necessarily be different, since all redundant NPs would by now have been removed. The

verb in the embedded sentence may not take the Modifier Neg as an expansion. Whatever other expansions it takes, they are required to be identical with expansions taken by the verb in the matrix. (Again, the deletion operations carried out by Ts 73 and 74 will ensure that, except in certain instances when Copulative sentences are involved, the heads of these expansions will not be nominals.) The verb in the matrix may, however, take any other expansions, including Neg. This, in fact, is one of the two points on which the identity condition is relaxed. The second point relates to the inflectional markers taken by the two verbs. These markers too are not required to be identical. Finally, if the embedded sentence involved is dominated by the node Sub A_1, it is required not to have chosen the Time particle u̲tanee. Strings which satisfy these conditions may optionally be subjected to the Deletion transformation, which will in each case delete the verbal complex of the embedded sentence together with any expansions it takes except the operative NP referred to above. It will, moreover, add the dative case suffix to this NP, replacing any case suffixes or postfixes it takes in the process. Thus

331. puyal vanta piRaku amayti varum.

[[After the storm comes, the calm comes]] ,

subjected to the transformation, will become

332. puyalukku piRaku amayti varum.

"After the storm comes the calm."

Before setting out the rule which accounts for these details, it must be pointed out that when the embedded sentence is a Copulative sentence, among the expansions deleted will be Comp, whether realized by a NP or by a different kind of element. This is illustrated by

333. raamanukku mun veelu saŋkattin talayvan aanaan.

"Velu became the President of the society before Rama."

which is derived by means of this rule from

334. raaman saŋkattin talayvan aaka mun veelu saŋkattin talayvan aanaan.

[[Velu became the President of the society before Rama became the President of the society]].

T 75 (Optional) Deletion of Verbal Complex - 1

$$W - (Ex_1) - NP_1\ (case_1)\ (postfix_1) - (Ex_2) - VB_1 - Mo_1 - Inflec -$$
$$Par - X - (Ex_3) - NP_2\ (case_2)\ (postfix_2) - Y - (Ex_4) -$$
$$Z - VB_2 - A - Mo_2 - B - (Neg) - C \Rightarrow$$

$$W - NP_1\ \hat{}\ dat.c - Par - X - (Ex_3) - NP_2\ (case_2)\ (postfix_2) -$$
$$Y - (Ex_4) - Z - VB_2 - A - Mo_2 - B - (Neg) - C$$

where $(Ex_1)...Mo_1$ / S ← $\begin{Bmatrix} \text{Pre Act} \\ \text{Sub } A_1 \end{Bmatrix}$

$\begin{Bmatrix} NP_1 \ (case_1) \ (postfix_1) \\ NP_2 \ (case_2) \ (postfix_2) \end{Bmatrix}$ ← x

$case_1 = case_2$

$postfix_1 = postfix_2$

$NP_1 \neq NP_2$

$VB_1 = VB_2$

$Ex_1 = Ex_3$

$Ex_2 = Ex_4$

$Mo_1 = Mo_2$

Par / $\begin{Bmatrix} \underline{mun} \\ \underline{pin} \\ \underline{piRaku} \end{Bmatrix}$

W...C has passed through Ts 73 and 74 if it had qualified to do so

(Mo here and below will refer to Modifier, though it is clear from the rule that it does not cover every Modifier taken by the verb in the matrix. Inflec will similarly refer to the inflections taken by the verb in the embedded sentence.)

The second of the rules referred to above applies to strings in which the verbal complex to be deleted belongs to a sentence dominated by Neut Act. Two features distinguish this rule from the first, the derivational history of the source strings apart. Firstly, the

operative NP may be in one of only three functions, subject, Object or Rec. Secondly, the rule, while deleting any case marker the operative NP in the embedded sentence may take, will not add any other case marker between it and the Time postfix. In all other respects, this rule is identical with the rule described above. An example of a sentence derived by its means is

335. pala muntiya kuṭiyeeRRa naaṭukaḷukku arasiyaR sutantirattooṭu poruḷaataaras sutantiram kiṭaykkavillay.
"Many former colonies did not obtain economic independence with their political independence." ,

the source sentence of which is

336. pala muntiya kuṭiyeeRRa naaṭukaḷukku arasiyaR sutantiram kiṭayppatooṭu poruḷaataaras sutantiram kiṭaykkavillay.
"Many former colonies did not obtain economic independence when they obtained political independence."

T 76 (Optional) Deletion of Verbal Complex - 2

$$W - (Ex_1) - NP_1\ (case_1) - (Ex_2) - VB_1 - Mo_1 - Inflec - [\ +\ Pron,\ +\ Thd\ P,\ +\ Neut,\ +\ Sg\ ] - \left[\frac{-ooṭu}{-uṭan}\right] - X - (Ex_3) - NP_2\ (case_2) - Y - (Ex_4) - Z - VB_2 - A - Mo_2 - B - (Neg) - C \Rightarrow$$

$$W - NP_1 \left[\begin{matrix}\text{-oo}\underline{\text{t}}\text{u} \\ \text{-u}\underline{\text{t}}\text{an}\end{matrix}\right] - X - (Ex_3) - NP_2\ (case_2) - Y - (Ex_4) -$$

$$Z - VB_2 - A - Mo_2 - B - (Neg) - C$$

where $(Ex_1)...Mo_1$ / S ← Neut Act

$$\left\{\begin{matrix}NP_1\ (case_1) \\ NP_2\ (case_2)\end{matrix}\right\} \leftarrow x \ / \ \left\{\begin{matrix}\text{Subject} \\ \text{Object} \\ \text{Rec}\end{matrix}\right\}$$

$case_1 = case_2$

$NP_1 \neq NP_2$

$VB_1 = VB_2$

$Ex_1 = Ex_3$

$Ex_2 = Ex_4$

$Mo_1 = Mo_2$

W...C has passed through Ts 73 and 74 if it had qualified to do so

The last of the three rules deletes verbal complexes in embedded sentences dominated by the node Man Comp. While this rule shares many features with the two rules already discussed, certain significant differences must be noted. Where the operative NP in the embedded sentence takes a case inflection and/or a postfix, the transform retains them. Where it does not (that is, where it is in subject function), it is assigned an accusative case inflection. This difference entails the formulation of two separate sub-rules.

Certain comments are called for by the Modifier Neg in strings subjected to this rule. The Comparative Manner transformation

(T 28) which produces such strings had indicated that the verb in the embedded sentence could take Neg as a Modifier only if the verb in the matrix did so. It had also indicated that the verb in the matrix could take this Modifier whether or not the verb in the embedded sentence did so. These facts are relevant to the understanding of a certain ambiguity which characterizes some of the strings produced by the Deletion rule under discussion. For example,

337. muRpaṭṭa ejamaanayp poola ippoḻutirukkiRa ejamaan paṇiyaaḷaray koṭuuramaaka naṭattuvatillay.

can have two meanings at least, depending on whether it has been derived by means of this rule from

338. muRpaṭṭa ejamaan paṇiyaaḷaray koṭuuramaaka naṭattaatatu poola ippoḻutirukkiRa ejamaan avanay koṭuuramaaka naṭuttuvatillay.
"Just as the servant's previous master did not illtreat him, his present master does not illtreat him." ,

where the verbs in both constituent sentences take Neg, or from

339. muRpaṭṭa ejamaan paṇiyaaḷaray koṭuuramaaka naṭattiṉatu poola ippoḻutirukkiRa ejamaan avanay koṭuuramaaka naṭattuvatillay.
"The servant's present master does not illtreat him as his previous master illtreated him." ,

where only the verb in the matrix has taken Neg.

337 is ambiguous in yet another way. The ambiguity can be easier explained if the discussion is transferred from 337 to a more convenient sentence

340. kuraŋkayp poola manitan paayntaan. ,

which in all respects relevant to the point under discussion exactly parallels 337. On the one hand, 340 may be accounted for by means of an Adjectivalization transformation not provided in the present work. In this case, it would have the reading

341. "The $\left\{\begin{matrix}\text{man who was like a monkey}\\ \text{monkey-like man}\end{matrix}\right\}$ jumped."

On the other hand, it may be derived by means of the Deletion rule under discussion from

342. kuraŋku paayntatu poola manitan paayntaan.
"Just as the monkey jumped, the man jumped."

In this case, it would have the reading

343. "The man jumped like the monkey."

If 340 had been produced by the Adjectivalization rule referred to, the particle <u>poola</u> in it could have been replaced by an alternative form of it, <u>poonRa</u>. The resulting sentence would have had the one unambiguous reading, 341. In speech, the differences in meaning are generally underlined by intonational devices.

Of the three rules which delete verbal complexes, only

T 77 below can operate on strings whose embedded sentences contain $V_{\underline{Cop\ Iden}}$ as their main verb, and in this case too the operation is limited to the first of the sub-rules. Since $V_{\underline{Cop\ Iden}}$ cannot take Modifiers of the kind that are covered by Mo in the rule, T 77.1 will have to put this element, as well as A and B in the matrix (whose verb it must be remembered is identical with the verb of the embedded sentence) in parentheses.

T 77 (Optional) Deletion of Verbal Complex - 3

T 77.1

$$W - (Ex_1) - NP_{1sub1} - (Ex_2) - VB_1 - (Mo_1) - Inflec - [\ +\ Pron,\ +\ Thd\ P,\ +\ Neut,\ +\ Sg\ ] - \underline{poola} - X - (Ex_3) - NP_{2sub2} - Y - (Ex_4) - Z - VB_2 - (A) - (Mo_2) - (B) - (Neg) - C \Rightarrow$$

$$W - NP_1\ \hat{}\ acc.c - \underline{poola} - X - (Ex_3) - NP_{2sub2} - Y - (Ex_4) - Z - VB_2 - (A) - (Mo_2) - (B) - (Neg) - C$$

where $(Ex_1)...Mo_1$ / S ← Man Comp

$NP_1 \neq NP_2$

$VB_1 = VB_2$

$Ex_1 = Ex_3$

$Ex_2 = Ex_4$

$Mo_1 = Mo_2$

W...C has passed through Ts 73 and 74 if it had qualified to do so

T 77.2

$$W - (Ex_1) - NP_1 \text{ ^ } case_1\ (postfix_1) - (Ex_2) - VB_1 - Mo_1 -$$

$$[\ +\ Pron,\ +\ Thd\ P,\ +\ Neut,\ +\ Sg\ ] - \underline{poola} - X -$$

$$(Ex_3) - NP_2 \text{ ^ } case_2\ (postfix_2) - Y - (Ex_4) - Z -$$

$$VB_2 - A - Mo_2 - B - (Neg) - C \quad \Rightarrow$$

$$W - NP_1 \text{ ^ } case_1\ (postfix_1) - \underline{poola} - X - (Ex_3) - NP_2 \text{ ^ } case_2$$

$$(postfix_2) - Y - (Ex_4) - Z - VB_2 - A - Mo_2 -$$

$$B - (Neg) - C$$

where $(Ex_1)...Mo_1$ / S ← Man Comp

$$\begin{Bmatrix} NP_1 \text{ ^ } case_1\ (postfix_1) \\ NP_2 \text{ ^ } case_2\ (postfix_2) \end{Bmatrix} \leftarrow x$$

$case_1 = case_2$

$postfix_1 = postfix_2$

$NP_1 \neq NP_2$

$VB_1 = VB_2$

$Ex_1 = Ex_3$

$Ex_2 = Ex_4$

$Mo_1 = Mo_2$

W...C has passed through Ts 73 and 74 if it had qualified to do so

Among the strings produced by T 77.2 is one which would underlie Irregular Impersonal sentences like

344. kantanukkup poola raamanukku uṇmayayt teriyum.

"Rama, like Kandan, knows the truth."

Where in such a string the NP preceding poola is the subject of the embedded sentence, its dative case inflection may be replaced by the accusative case inflection. 344 thus altered will become

345. kantanayp poola raamanukku uṇmayayt teriyum.

T 78 (Optional) Replacement of Dative Case Inflection

$$W - NP \hat{} \text{dat.c} - \underline{\text{poola}} - X - V_{Imp} - Z \Rightarrow$$

$$W - NP \hat{} \text{acc.c} - \underline{\text{poola}} - X - V_{Imp} - Z$$

where W...Z / Irregular Impersonal Pattern ← T 77.2

NP / Subject of embedded sentence

The next set of Deletion rules do not require the strings they operate on to be derived by means of embedding transformations. The first of them deletes the Object NP of sentences whose main verb is either of the Irregular Impersonal verbs, kaaṇum or pootum "be enough". The deletion may take place only if the Object NP concerned is a Third Person Singular Inanimate pronoun, and if the verb takes a Conditional expansion. Thus

346. uṭal nalattukku eetuvaana vaayppukkaḷ maṭṭum kiṭayttaal atu murukanukku kaaṇum.

will be reduced by the transformation to its more usual form

347. uṭal nalattukku eetuvaana vaayppukkaḷ maṭṭum kiṭayttaal murukanukku kaaṇum.

"It is enough for Murukan if he gets just his material comforts."

A further point that the rule below will indicate is that the pronoun must take a Demonstrative Qualifier, which will be deleted along with it. Certain other points relating to the reference of the pronoun will not be accounted for by the rule.

T 79 Deletion of Object in Irregular Impersonal Sentences

$$W - NP_{sub} - X - \underline{\text{Demons}} \; \hat{} \; [\; \underline{+ \text{Pron}, + \text{Thd P}, + \text{Sg}, - \text{Anim}} \;]_{Obj} - \left[\frac{\text{kaaṇum}}{\text{pootum}}\right] - Z \Rightarrow$$

$$W - NP_{sub} - X - \left[\frac{\text{kaaṇum}}{\text{pootum}}\right] - Z$$

where X c S ← Condi

The next rule obligatorily deletes the Third Person Singular Inanimate pronoun subject of transforms produced by the Non-Immediate Conditon Manner Adverbial transformations (Ts 33 to 35). It will be recalled that in one instance (see discussion of T 36) this subject

has already been deleted. T 80 below deletes it in the remaining instances of its occurrence, thus converting ungrammatical strings like 133 and 134 into grammatical strings like 131 and 132 respectively

T 80 Deletion of Subject Pronoun in Adverbialized Sentences

$$X - [\ +\text{Pron}, +\text{Thd P}, +\text{Sg}, -\text{Anim}]_{sub} - Z \Rightarrow$$

$$X - Z$$

$$\text{where} \quad X...Z \Leftarrow \begin{Bmatrix} \text{T 33} \\ \text{T 34} \\ \text{T 35} \end{Bmatrix}$$

In the discussion of the basic sentence patterns of Tamil it was mentioned that certain monopartite subjectless sentences • are most satisfactorily treated as having been derived by means of a Deletion transformation from bipartite sentences with pronouns as subjects. The next rule accounts for this process, which explains the derivation of sentences like 27 from sentences like 30 in Chapter II. In addition to the comments made on the rule in Chapter II, there are certain other comments to be made. One is that where Irregular Impersonal sentences are involved, the rule deletes the dative case inflection of the subject NP together with the NP. A second comment relates to the fact that Third Person pronouns obligatorily take a Qualifier. The rule will specify first, that this Qualifier must be Demons, and second, that it is deleted along with the pronoun it qualifies. Finally, the subject pronoun cannot be deleted from a sentence whose main verb is $V_{\text{Cop Iden}}$ unless it is preceded by a

sentence whose main verb too is $V_{\underline{Cop\ Iden}}$. When, moreover, the subject pronoun in such a sentence is in the First or Second Person, it cannot be deleted unless the previous sentence has already used it as a subject. These facts, which involve extra-sentential considerations, do not lend themselves to the kind of formalization that the present work has limited itself to, and will, therefore, be ignored by the rule.

T 81 (Optional) Deletion of Subject Pronoun

$$X - \underline{(Demons)}\ [\ +\ Pron,\ \ldots\ ]\ \hat{}(dat.c)_{sub} - Z \Rightarrow$$

$$X - Z$$

The next rule deletes the Object of verbs which have been assigned the feature [+ Obj Del] by the lexicon. It will account for the derivation of sentences such as 42 and 43 a) from sentences such as 42 and 43 b) respectively, in Chapter II.

T 82 Deletion of Object

$$X - Object - [\ +\ V,\ \ldots,\ +\ Obj\ Del\ ] - Z \Rightarrow$$

$$X - [\ +\ V,\ \ldots,\ +\ Obj\ Del\ ] - Z$$

It must be pointed out that T 82 has not taken into account the criterion of recoverability invoked by most of the other Deletion rules. This is because the writer is of the tentative opinion that sentences derived by means of T 82 might possibly be multiply ambiguous, a point of view that is given some sort of negative formal support by

by the impossibility of isolating any one item which might reasonably be said to be the deleted item.

T 83 optionally deletes the Purpose postfix aaka from sentences like

348. eeḷayp peṇ piḷḷaykaḷin nalattukkaaka varunti uḷayttaaḷ.

"The poor woman toiled for her children's welfare."

When the postfix is preceded by a nominalized sentence, its deletion may optionally result in the replacement of the Tense, the nominalization and the dative case suffixes the verb in the nominalized sentence takes by the Infinitive. This point, which has been discussed and illustrated on p. 306, will be accounted for by T 84.

T 83 (Optional) Deletion of Purpose Postfix

X - P ^ aaka - Z ⇒

X - P - Z

where P ^ aaka ← Substit

T 84 (Optional) Conversion of Verb in Purpose Sentences

X - A ^ VB ^ B ^ Tense ^ [+ Pron, + Thd P, + Neut, + Sg] ^

dat.c - Z ⇒

X - A ^ VB ^ B ^ Inf. - Z

where X...Z ⇐ T 83 ⇐ T 24

The Negative transformation, which takes place when a verbal element in a string selects Neg as a Modifier, has to precede the rest of the Deletion rules because it operates on some forms that the latter delete. In the discussion below, the consideration of the changes carried out by the Negative transformation in strings which contain non-regular verbal complexes (that is, complexes which contain an Irregular Impersonal verb, $V_{Cop\ Iden}$, a Modal or either of the V_{Pos} verbs, aaka or u|) will be postponed until the changes it carries out in strings which contain regular verbal complexes are investigated.

When a regular verbal complex selects Neg in an Imperative sentence, the transformation deletes its Tense and Concord inflections, which, as in any verbal complex, are carried by the last verbal element. Thus from the positive Imperative sentence

349. nii avanuṭaya muyaRsikku uRsaakam uuṭṭuvaay.
[[You encourage his endeavours]]

(this represents the form all Imperative sentences will have at the current stage of the grammar), it will derive the negative sentence

350. nii avanuṭaya muyaRsikku uRsaakam uuṭṭ{-aatee / -a veeṇṭaam}.
[[You do not encourage his endeavours]].

When the second of the alternatives provided by 350 is chosen, the deletion of the inflections carried by the last verbal element in the complex will be accompanied by its conversion into the infinitive. (It needs to be pointed out that the form veeṇṭaam in 350 is phonolo-

gically identical with the negative form of the Irregular Impersonal verb veeṇṭum "want", and resembles the Jussive Modal veeṇṭum "must".)

When a regular verbal complex in a sentence that has been embedded by the Conditional Adverb transformation (T 27) takes Neg, the Negative transformation effects one of two kinds of change in it depending on whether the sentence it belongs to has chosen the first or the second of the alternatives made available to it by T 27. If this sentence has chosen the second of the alternatives, the Negative transformation carries out the same changes in the verbal complex as it carries out in verbal complexes belonging to non-embedded sentences, and it is not necessary, therefore, to describe them at this point. If, however, it has chosen the first of the alternatives, the Negative transformation introduces the Conclusive Aspectival between Neg and the Conjunctival Participle of the verbal complex, and transfers its Tense inflection (which, as has been indicated, will be obligatorily converted to Past by a Tense Adjustment rule) from the last verbal element to this Aspectival. Thus from

351. makkaḷ as saṭṭattay eeRRukkoṇṭaal sutantirattay iḻappaarkaḷ.
"If the people accept that law, they will lose their freedom.

it derives

352. makkaḷ as saṭṭattay eeRRukkoḷḷaaviṭṭaal sutantirattay iḻappaarkaḷ.
"If the people do not accept that law, they will lose their freedom."

When a regular verbal complex in a sentence embedded by a transformation other than T 27 takes Neg, the Negative transformation carries out the change illustrated by

353. vaṇṭikkaaran vaṇṭiyay marakkarikaḷooṭu nirapp{-aamal / -aatu} santaykku poonaan.

"The carter went to the fair without filling his cart with vegetables."

in it. This consists simply in the deletion of the Tense marker taken by the preceding verbal element (which will invariably be the last verbal element in the complex). The distinction between the two alternative forms of the Negative particle in sentences like 353 will be a matter for the morphophonemic rules to attend to. In some sentences only one of the two forms is possible.

T 85 Negative: Imperative Sentences

Imp - X - VB - (Asp) - Tense - Concord - Neg - Z ⇒

Imp - X - VB-- (Asp) - {Neg / Inf. ^ veeṇṭaam} - Z

T 86 Negative: Embedded Sentences

T 86.1 Conditional Adverb Transforms

X - VB - (Asp) - Tense - Neg - Conj.Part. - -aal (-um) - Z =

X - VB - (Asp) - Neg - viṭu - Tense - Conj.Part. - -aal (-um) - Z

T 86.2 General

X - VB - (Asp) - Tense - Neg - Z ⇒

X - VB - (Asp) - Neg - Z

where VB...Neg belongs to a sentence which has been embedded by any transformation but T 27.

VB ≠ Irregular Impersonal Verb

Before passing on, it must be pointed out that a number of embedding transformations above had prevented the verbal complex in the sentences they had embedded from taking Neg.

In contexts other than those dealt with, the changes the Negative transformation carries out in regular verbal complexes vary according to the Tense marker they take. When the Tense marker is Future, as in

354. raaman veelayays seyvaan.

"Rama will do the work." ,

the transformation may act in one of three ways. Firstly, it may convert the preceding verbal element into the Infinitive, retaining both the concordial inflections and the Tense marker. A later rule will transfer the concordial inflections from in front of Neg to a position immediately following it, and an even later morphophonemic rule will have to specify that in this context Fut ^ Neg → maaṯṯ- . 354 subjected to these changes will become

355. raaman veelayays seyya maaṭṭaan.

"Rama will not do the work."

Secondly, the transformation may replace the Concord markers taken by the verbal complex with the form -atu, which is phonologicall identical with both the nominalizing suffix introduced by T 37, and th non-Future Singular Neuter or Inanimate inflection of verbs. Neg will in this context receive the shape illay. By this process, 354 will become

356. raaman veelayays seyvatillay. ,

which translates as 355 does.

Thirdly, the transformation may simply delete the Future Tense marker, to give, from 354, the third synonymous negative sentence

357. raaman veelayays seyyaan.

This last alternative is chosen mainly when the verb carries the Neuter or Inanimate inflection, which, the morphophonemic rules will indicate, will be realized not as -um (its usual shape) but as -atu in this context. This is illustrated by

358. kiraamavaasikaḷin eṉṉappaaṉkukaḷ virayvaaka maaRaatu.

"The attitudes of the villagers will not change quickly."

Neg in sentences thus produced will have overt phonological shape only when the verb takes the Neuter or Inanimate inflection.

T 87 Negative: Regular Future Tense Verbal Complexes

$$X - VB - (Asp) - Fut - Concord - Neg - Z \Rightarrow$$

$$X - VB - (Asp) - \left\{\begin{matrix} Fut - \text{-atu} \\ (Inf. - Fut) - Concord \end{matrix}\right\} - Neg - Z$$

If a string which enters T 87 chooses the first of the alternatives offered, the result is the kind of string which underlies sentences like 356. If, however, it chooses the second of these alternatives, it is required to submit itself to a further permutation rule, which will obligatorily interchange the positions of Neg and Concord in it. This operation will produce the kind of string which underlies sentences like 355 or 358, the former if the elements Inf. and Fut are chosen, the latter if they are not.

T 88 Permutation of Negative and Concord Elements

X - VB - (Asp) - (Inf. - Fut) - Concord - Neg - Z ⇒

X - VB - (Asp) - (Inf. - Fut) - Neg - Concord - Z

Where a regular verbal complex which inflects for the Past or Present Tense takes Neg as a Modifier, the Negative transformation need take place only optionally. Thus if the verbal complex of

359. kaʈsiyin talayvan aŋkattavarkaɭin naʈavaʈikkaykaɭay aŋkiikarittaan.
"The leader of the party authorised the measures taken by its members." ,

which inflects for the Past Tense, takes Neg, a simple morphophonemic rule which converts Neg to illay will suffice to produce the negative sentence

360. kaʈsiyin talayvan aŋkattavarkaɭin naʈavaʈikkaykaɭay aŋkiikarittaan illay.

"The leader of the party did not authorise the measures taken by its members."

If, however, a string of the kind underlying 359 (that is, a string which contains a verbal complex which inflects for the Past Tense) opts to submit itself to the Negative transformation, the transformation will effect one of two sets of changes in it: either it will replace the concordial inflections of the verbal complex with the form -atu, or it will delete these inflections and convert the last verbal element of the verbal complex into the Infinitive. In the former case, the result will be

361. kaʦsiyin talayvan aŋkattavarkaɭin naʈavaʈikkaykaɭay aŋkiikarittatillay. ,

and in the latter

362. kaʦsiyin talayvan aŋkattavarkaɭin naʈavaʈikkaykaɭay aŋkiikarikkavillay.

Both these sentences translate as 360 does.

If a string which opts to submit itself to the Negative transformation contains a verbal complex which inflects for the Present Tense, the transformation cannot carry out the second of the operations described in the preceding paragraph on it. If, however, the last verbal element of the complex in such a string is the V_{Pos}, iru, the transformation can, as an alternative to the replacement of the concordial inflections with the form -atu, delete the entire verbal complex, including the Tense marker and the concordial inflections and excluding only Neg. Thus from

363. eeḻayp piḻḻaykku viḻayaaṭṭus saamaankaḷ irukkinRana.

"The poor child has toys."

the transformation will derive, by this process,

364. eeḻayp piḻḻaykku viḻayaaṭṭus saamaankaḷ illay.

"The poor child has no toys."

A later morphophonemic rule will specify that in all the cases dealt with above Neg is realized as illay.

Some of the observations made above are equally true of the treatment the Negative transformation metes out to certain irregular verbal complexes - those involving the Potentive Modal muṭi, or either of the V_{imp}, teri or piṭi - when they inflect for Tense. When they inflect for the Past Tense, the strings to which they belong may opt not to submit themselves to the transformation, whereupon no change will occur in them beyond the conversion of Neg to illay by a later morphophonemic rule. If these strings do opt to submit themselves to the transformation, it will delete the concordial elements taken by their verbal complexes, and convert the last verbal element in them to the Infinitive.

When Irregular verbal complexes of the kind under discussion inflect for the Present Tense, the strings to which they belong do not submit themselves to the Negative transformation.

T 89 (Optional) Negative: Regular Present Tense Verbal Complexes

T 89.1

X - iru - Pres - Concord - Neg - Z ⇒

X - (iru - Pres - -atu) - Neg - Z .

where iru / V_{Pos}

T 89.2

X - VB - (Asp) - Pres - Concord - Neg - Z ⇒

X - VB - (Asp) - Pres - -atu - Neg - Z

where VB ≠ Irregular Impersonal Verb

T 90 (Optional) Negative: Past Tense Verbal Complexes

T 90.1 Irregular Verbal Complexes

$$X - \begin{bmatrix} V_{Imp} & (Asp) \\ muṭi & \end{bmatrix} - Past - Concord - Neg - Z \Rightarrow$$

$$X - \begin{bmatrix} V_{Imp} & (Asp) \\ muṭi & \end{bmatrix} - Inf. - Neg - Z$$

where muṭi / Poten

V_{Imp} / Irregular Impersonal Verb

T 90.2 Regular Verbal Complexes

X - VB - (Asp) - Past - Concord - Neg - Z ⇒

$$X - VB - (Asp) - \begin{Bmatrix} Past - -atu \\ Inf. \end{Bmatrix} - Neg - Z$$

When $V_{\underline{\text{Cop iden}}}$ or either of the $V_{\underline{\text{Pos}}}$ verbs, aaka or ul, takes Neg, the Negative transformation generally deletes it. This is illustrated by

365. ilaŋkay oru kuɭirssiyaana naaṭalla.

"Ceylon is not a cold country."

The deletion takes place whether the verb is in an embedded sentance or not. If it is in a non-embedded sentence, the transformation generally deletes not only the verb but also its concordial inflections. When, however, the verb to be deleted is $V_{\underline{\text{Cop Iden}}}$, if its subject is either a First Person pronoun or a Third Person Singular Honorific NP, the transformation may retain the concordial inflections and attach them to the element Neg, immediately after it. This alternative is illustrated by

366. raaman intiyaakkaarar allar.

"Rama is not an Indian."

The morphophonemic rules will indicate that Neg has two shapes, illay and alla. In contexts of the kind illustrated by 365 and 366, it will always be the latter that is chosen.

T 91 Negative: Tenseless Verbs in Embedded Sentences

$$X - \begin{Bmatrix} V_{\text{Cop Iden}} \\ V_{\text{Pos}} \end{Bmatrix} - \text{Neg} - Z \Rightarrow$$

$$X - \text{Neg} - Z$$

where $\begin{Bmatrix} V_{\text{Cop Iden}} \\ V_{\text{Pos}} \end{Bmatrix}$ belongs to an embedded sentence

$V_{\text{Pos}} \neq$ iru

T 92 Negative: Tenseless Verbs in Non-Embedded Sentences

T 92.1

$$X - NP_{sub} - Y - V_{Cop\ Iden} - Concord - Neg - Z \Rightarrow$$

$$X - NP_{sub} - Y - Neg - (Concord) - Z$$

where NP / W ^ [{ + Pron, + Fst P, ... ; + { N ; Pron } , + Sg, + Hon, ... }]^

T 92.2

$$X - NP_{sub} - Y - \left\{ \begin{matrix} V_{Cop\ Iden} \\ V_{Pos} \end{matrix} \right\} - Concord - Neg - Z \Rightarrow$$

$$X - NP_{sub} - Y - Neg - Z$$

where $V_{Pos} \neq$ iru

No rule is necessary at this point to account for the changes that take place when tenseless Irregular Impersonal verbs or Modals take Neg, for all of them appear to be essentially morphophonemic in character.

The form that Imperative strings will have at the present stage of the development of the grammar is illustrated by

367. nii av veelayays seyvaay.
[[You do that work]].

Sentences like 367 tend, however, to have a very artificial flavour, and generally their subject, as well as the Future Tense marker and

the concordial inflections of their verb are deleted. 367 subjected to the rules which delete these elements will become

368. av veelayays sey.

"Do that work."

Where the verb in an Imperative sentence inflects for the features [+ Scd P, + Sg, + Hon] or for the features [+ Scd P, + Pl], the deletion of the concordial inflections will not take place, although the deletion of the Future Tense inflection will. However, the former set of features will, when they occur, be replaced by the latter. The morphophonemic rules will later indicate that the formative which represents this set of features will assume a different shape from normal in this context. This shape appears in

369. en viiṭṭukku vaarunkaḷ.

"Come to my house." ,

the source sentence of which is

370. en viiṭṭukku varuviirkaḷ.

T 93 (Optional) Deletion of Verbal Inflections in Imperative Sentences

T 93.1

$$\text{Imp - X - VB - Y - Fut - [+ Scd P, } \begin{Bmatrix} \text{+ Sg, + Hon} \\ \text{+ Pl} \end{Bmatrix} \text{]} \Rightarrow$$

$$\text{Imp - X - VB - Y - [+ Scd P, + Pl]}$$

T 93.2

$$\text{Imp - X - VB - Y - Fut - Concord} \Rightarrow$$

$$\text{Imp - X - VB - Y}$$

Sentences whose verbs take the Optative Modal may be subjected to a deletion rule similar to T 93. The kind of Optative string the rules will produce at the present stage of the grammar is illustrated by

371. tampatikaɭ santooʃamaaka vaaɭvaarkaɭ aaka.

"May the couple live happily."

371 may, however, be optionally reduced to

372. tampatikaɭ santooʃamaaka vaaɭka. ,

which is produced by deleting the Tense and Concord markers of the verb in 371, and converting the Optative Modal aaka in it to a reduced form -ka, which must occur bound with the preceding verbal element. The reduction of the Modal will be entrusted to a morphophonemic rule.

T 94 (Optional) Reduction of Optative Sentences

X - VB ^ Fut ^ Concord - Optat ⇒

X - VB ^ Optat

The final set of deletion rules concerns $V_{Cop\ Iden}$ and the V_{Pos} , aaka. In certain contexts, as in the environment of Neg, their deletion is obligatory. The rules which have gone before have accounted for all instances when this is so but one, which is when the Comp of $V_{Cop\ Iden}$ or the subject NP of the V_{Pos} takes Q_{aa} . The following rule will attend to this particular instance of the deletion of the verbs mentioned. The kind of sentence it will account for is illustrated by 299.

T 95 Deletion of *aaka* - 1

$$W - \begin{bmatrix} Comp \\ NP_{sub} \end{bmatrix} \hat{} Q_{aa} - \begin{bmatrix} V_{Cop\ Iden} \\ V_{Pos} \end{bmatrix} \Rightarrow$$

$$W - \begin{bmatrix} Comp \\ NP_{sub} \end{bmatrix} \hat{} Q_{aa}$$

where V_{Pos} / *aaka*

In most other contexts in which $V_{Cop\ Iden}$ and the V_{Pos}, *aaka*, appear, they may be optionally deleted. The main condition on this operation is that these verbs should not belong to an embedded sentence. There is one instance when this condition is inoperative, and that is when the verbs are functioning as the main verb of a sentence developed from *Quotat* within the embedded sentence. Further instances when the deletion of these verbs is not possible will become statable when the Conjunction transformations are worked out.

T 96 (Optional) Deletion of *aaka* - 2

$$W - \left\{ \begin{matrix} V_{Cop\ Iden} \\ V_{Pos} \end{matrix} \right\} - Z \Rightarrow$$

$$W - Z$$

where $\left\{ \begin{matrix} V_{Cop\ Iden} \\ V_{Pos} \end{matrix} \right\}$ may belong to an embedded sentence only if it is the main verb of a Quotat within this sentence

V_{Pos} / *aaka*

Certain of the changes wrought in embedded sentences relate to the Tense markers taken by their verbs. In certain cases, the rules

which had embedded them had already accounted for these changes in Tense. The next set of rules will account for those changes which, for various reasons, had had to be postponed.

The first of the rules relates to strings produced by any one of the following transformations: Simultaneous Action 2 (T 16), Subsequent Action 1 and 2 (Ts 17 and 18), Time : Commencement (T 20), Commencement 1 and 2 (Ts 22 and 23), and Factive Object (T 38) Conditional Adverb (T 27). In such strings, Pres and Fut, if taken by the verbal complex in the embedded sentence, are obligatorily converted to Past. This is illustrated by

373. tassan katirayay tirutti amaytta pin murukan avanukku paɳam koṭuppaan.

"Murukan will pay the carpenter after he repairs the chair." The verb of the sentence embedded by T 17 in deriving 373 would originally have inflected for the Future Tense.

In strings produced by T 27, the change described will take place only if the verbal complex of the embedded sentence is followed by the elements Conj.Part. ^ -aal ^ (-um). This accounts for the Past Tense inflection of the verb in the embedded sentence in

374. vaɳɳaan uṭuppukaḷay kallil aṭittaal avay kiḷiyum.

"If the dhoby beats the clothes on a rock, they will tear." Here too this verb would originally have inflected for the Future Tense.

T 97 Tense Adjustment: Conversion of Tense to Past

$$W - VB - X - \left\{\begin{matrix}Pres\\Fut\end{matrix}\right\} - Y - Z \Rightarrow$$

$$W - VB - X - Past - Y - Z$$

where VB belongs to a sentence embedded by T 16, 17, 18, 20, 22, 23, 27 or 38

Y / Conj.Part. ^ -aal ~ (-um) if VB belongs to a sentence embedded by T 27

The next Tense Adjustment rule indicates that in certain contexts preceding the Conjunctival Participle regularly inflecting verbs enter into a two- and not a three-term system of Tense. When the Conjunctival Participle precedes paṭiyaal in a string produced by the transformation of Reason (T 25), or when it precedes a nominal other than a Third Person pronoun in a string produced by an Adjectivalization transformation, any Future Tense marker taken by the verbal complex preceding it is obligatorily converted to Pres. This is illustrated by

375. potumakkaḷ niitipati naaḷaykku veḷiyiṭukiRa tiirppay etirpaarkkiRaarkaḷ.

"The public are awaiting the decision the judge will announce tomorrow."

The verb in the sentence embedded by the Adjectivalization rule, T 42, in deriving 375 would originally have taken a Future Tense marker.

The change described does not occur when the Conjunctival Participle in a string produced by an Adjectivalization rule is followe by a Third Person pronoun. Indeed, if any change does occur, it is in the opposite direction. To illustrate, when

376. piḷḷay atay vaasikkiRaan.

"The child is reading it."

is embedded in an appropriate sentence by T 42, the Present Tense marker of its verb may be retained, as is borne out by

377. pillay vaasikkiRatu ennavenRu teriyumaa?

"Do you know what the child is reading?" ,

or it may be replaced by the Future Tense marker, as is borne out by the alternative form of 377,

378. pillay vaasippatu ennavenRu teriyumaa?

T 98 Tense Adjustment: Conversion of Future to Present

W - VB - X - Fut - Conj.Part. - Y - Z $\Rightarrow$

W - VB - X - Pres - Conj.Part. - Y - Z

where Y / $\left\{ \begin{matrix} \text{Nominal} \\ \underline{\text{patiyaal}} \end{matrix} \neq [+ \text{Pron}, + \text{Thd P}, ..] \right\}$

T 99 (Optional) Tense Adjustment: Conversion of Present to Future

W - VB - X - Pres - Conj.Part. - [+ Pron, + Thd P, ..] - Z $\Rightarrow$

W - VB - X - Fut - Conj.Part. - [+ Pron, + Thd P, ..] - Z

where VB $\neq$ V_{Imp}

Generally, the replacive Tense markers introduced by Ts 98 and 99 have a time-neutral flavour. This, in fact, is very often the case with Tense markers introduced by transformations.

The next Tense Adjustment rule converts any non-Future Tense marker taken by verbs in certain specified strings to Future. There are two classes of strings on which this rule operates. The first of them consists of strings which have passed through the General Nominalization transformation (T 37). If a sentence nominalized by T 37 is not followed by either of the Subsequent Action postfixes pin or piRaku, or by the Reason particle -aal, any non-Future Tense marker carried by its verbal complex may optionally be replaced by Fut. Thus

379. kaɳapatipiḷḷay poortukkeeyarkaḷ ilaɲkaykku vantatayp paRRi peesinaar.

"Kanapathipillay spoke of the coming of the Portuguese to Ceylon." ,

which contains a sentence that has been nominalized by T 37, has an alternative form

380. kaɳapatipiḷḷay poortukkeeyarkaḷ ilaɲkaykku varuvatayp paRRi peesinaar.

The second class of strings on which the Tense Adjustment rule below operates is derived by means of the Conditional Adverb transformation (T 27). If in such a string the embedded sentence has had the elements aana ^ -aal ^ (um) affixed to it, any non-Future Tense marker carried by its verbal complex is obligatorily replaced by Fut. This is illustrated by 112 above.

The Future Tense marker introduced by this rule will have a time-neutral flavour.

T 100 Tense Adjustment: Conversion of Tense to Future

T 100.1 (Optional) Nominalized Strings

$$W - VB - X - \left\{\begin{matrix}\text{Pres}\\ \text{Past}\end{matrix}\right\} \hat{} [+ \text{Pron}, + \text{Thd P}, + \text{Sg}, + \text{Anim}] - Y - Z \Longrightarrow$$

$$W - VB - X - \text{Fut} \hat{} [+ \text{Pron}, + \text{Thd P}, + \text{Sg}, - \text{Anim}] - Y -$$

$$\text{where} \quad Y \neq \left\{\begin{matrix}\underline{\text{pin}}\\ \underline{\text{piRaku}}\\ \underline{\text{-aal}}\ \text{(Reason Particle)}\end{matrix}\right\} \hat{} D$$

T 100.2 Conditional Strings

$$W - VB - X - \left\{\begin{matrix}\text{Pres}\\ \text{Past}\end{matrix}\right\} - Y - \underline{\text{aana}} \hat{} \underline{\text{-aal}} \hat{} (\underline{\text{-um}}) - Z \Longrightarrow$$

$$W - VB - X - \text{Fut} - Y - \underline{\text{aana}} \hat{} \underline{\text{-aal}} \hat{} (\text{-um}) - Z$$

The next rule, which is optional, deletes the Present Tense marker in the environment of the Conjunctival Participle when it precedes a nominal which is not a Third Person pronoun. A morphophonemic rule will indicate that in strings which are subjected to this rule the Conjunctival Participle will assume the shape <u>-um</u>. The change described is illustrated by

381. uyartaramaana koo⌊paa⌊uka⌋ayp paRRi upateesikkum am manitan seyalmuRayil avay ellaavaRRayum maRukkiRaan.

"That man, who preaches high principles, denies them all in practice." ,

which is derived by means of this rule from

382. uyartaramaana kooṭpaaṭukaḷayp paRRi upateesikkiRa am manitan seyalmuRayil avay ellaavaRRayum maRukkiRaan.

It may not occur when the verbal element preceding the Tense marker is a V_{Imp} or a Potentive Modal.

T 101 (Optional) Tense Adjustment: Deletion of Present Tense Marker

X - VB - Y - Pres - Conj.Part. - Nom - Z $\Rightarrow$

X - VB - Y - Conj.Part. - Nom - Z

where Nom $\neq$ [+ Pron, + Thd P, ...]

Y c Poten

VB $\neq$ V_{Imp} if Y / null

The last Tense Adjustment rule indicates that the functions of the Future Tense marker may often be carried out by the Present Tense marker. Thus the sentences

383. viḻaa naaḷaykku muṭiyum.

and

384. viḻaa naaḷaykku muṭikiRatu.

may both translate

385. "The festival will end tomorrow." ,

although in the former, the verb is in the Future Tense paradigm, and in the latter, in the Present Tense paradigm. In spite of this identity of function between the two markers in certain contexts, it is necessary to keep them apart in the grammar, for the Present Tense marker

can generally have a present time reference which the Future Tense marker cannot. Other considerations which support this point relate to the cooccurrence restrictions between the Tense markers and Time elements.

There are certain contexts in which the change from Future to Present can in no circumstances take place. One is in Imperative sentences which have opted not to pass through the rule which deletes its Future Tense marker. A second is when the Future Tense marker has itself been introduced by a Tense Adjustment rule.

T 102 (Optional) Tense Adjustment: Conversion of Future Tense Marker to Present - General

$$X - VB - Y - Fut - Z \Rightarrow$$

$$X - VB - Y - Pres - Z$$

$$w \text{ where } X...Z \not\Leftarrow \begin{Bmatrix} T\ 99 \\ T\ 100 \end{Bmatrix}$$

$$X \not\in Imp$$

There is one set of verbal elements whose alterations of form in certain contexts appear at first sight to require treatment in terms of Tense Adjustment. These are the Irregular Impersonal verbs and the Modals. Often, when these elements are final in a verbal complex in sentences embedded by various transformations, they take on what appears to be a Past Tense inflection. This, for example,

is what the Irregular Impersonal verb takum "be suitable" does in

386. vellayaana peṇ tanakku aniyat takunta kaantiyulla saarikaḷay mattum vaaṅkinaaḷ.

"The fair skinned woman bought only bright sarees which suited her."

It appears best, however, not to treat this form as a Past Tense inflection for the reason that in the few statable contexts in which it appears, it does not contrast with any other Tense inflections. The present work will, therefore, leave it to the morphophonemic rules to indicate that the verbal elements under discussion will, in certain limited contexts, appear with a form which resembles a Past Tense marker.

The last rule accounts for the obligatory change described during the discussion of 177 in Chapter II.

T 103 Transference of mattum

X - NP ^ mattum ^ case ^ (postfix) - Z ⇒

X - NP ^ case ^ (postfix) ^ mattum - Z

In conclusion, it must be said that the writer claims no completeness for what the preceding pages set out. Various factors have been excluded from consideration. Partly, this is because the writer has no solution to offer to the problems raised by them. In

some cases, a further dissuasive consideration is involved, which is that an investigation of them presupposes a fuller study of NP, many details regarding which have been excluded from the present work as not being particularly relevant to it. Further work which remains to be done in these spheres will, clearly, call for some sort of reformulation of the analysis presented above. Even otherwise, certain of the solutions offered to problems above are acknowledgedly tentative, and further investigation may reveal that some parts of the language may be generalized in a more profitable way from that suggested. To the writer, of course, no more adequate or better motivated statement of the material appears at the moment to be available. As much as possible, he has endeavoured to follow the system where it leads. The fundamental asymmetry of linguistic systems as represented by Tamil, however, makes it all too clear that often the best that can be done is to exclude certain less important asymmetries from the system in order that the basic symmetries may be highlighted.

BIBLIOGRAPHY

Anderson, R.

(1821) Rudiments of Tamil Grammar. London: J. Haddon, Finsbury.

Arden, A.H.

(1958) A Progressive Grammar of Common Tamil. (Revised by A.C. Clayton.) Fifth Edition, Second Impression. Madras : Diocesan Press.

Bach, E.

(1964a) An Introduction to Transformational Grammars. New York : Holt, Rinehart and Winston, Inc.

(1964b) "Subcategories in Transformational Grammars." In H. Lunt (Ed.), Proceedings of the Ninth International Congress of Linguists. The Hague : Mouton & Co.

Bazell, C.E.

(1949a) "The Fundamental Syntactic Relations." Casopis Moderni Filologi, pp. 9 - 15.

(1949b) "On the Problem of the Morpheme." Archivum Linguisticum,1 (Fas 1); pp. 1 - 15.

(1952a) "The Correspondence Fallacy in Structural Linguistics." Ingiliz Filolojisi Dergisi, III, pp. 1 - 41.

(1952b) "Phonemic and Morphemic Analysis." Word,8, pp. 33 - 38.

(1953) Linguistic Form. (With Additions and Corrections, 1957.) Istanbul : Istanbul Press.

(1954) "The Choice of Criteria in Structural Linguistics." Word,10, pp. 126 - 135.

(1958) Linguistic Typology. (Inaugural Lecture) Oxford University Press.

(1962) "Meaning and the Morpheme." Word,18, pp. 132 - 142.

(1964) "Three Misconceptions of Grammaticalness." In C.I.J.M. Stuart (Ed.) Report of the Fifteenth Annual Round Table Meeting on Linguistics and Language Studies. (Georgetown University Monograph Series on Language and Linguistics, 17.)

Beschi, R.F.Const: J.

(1835) A Grammar of the Common Dialect of the Tamulian Language called தொதிருந்தமிழ். Translated by C.H. Horst. Madras : Vespery Mission Press.

Bloch, J.

(1954) The Grammatical Structure of Dravidian Languages. Translated by Ramakrishna Ganesh Harshe. Poona.

Bloomfield, L.

(1933) Language. Revised and First Published in Great Britain, 1935. London : George Allen & Unwin Ltd.

Caldwell, R.

(1875) A Comparative Grammar of the Dravidian or South-Indian Family of Languages. (Second Edition, Revised and Enlarged.) London : Trubner & Co., Ludgate Hill.

Chomsky, N.

(1955) "Logical Syntax and Semantics : Their Linguistic Relevance." Language, 31, pp. 36 - 45.

(1957b) Syntactic Structures. The Hague : Mouton & Co.

(1961a) "On the Notion 'Rule of Grammar'." Proceedings of the Twelfth Symposium in Applied Mathematics, XII, pp. 6 - 24. Reprinted in Fodor and Katz (1964).

(1961b) "Some Methodological Remarks on Generative Grammar." Word, 17, pp. 219 - 239. Reprinted in Fodor and Katz (1964).

(1962a) "A Transformational Approach to Syntax." In A.A. Hill (Ed.) Proceedings of the Third Texas Conference on Problems of Linguistic Analysis in English, 1958, pp. 124 - 148. Reprinted in Fodor and Katz (1964).

(1962b) "Explanatory Models in Linguistics." In E. Nagel, P. Suppes and A. Tarski (Eds.), Logic,Methodology and Philosophy of Science. Stanford, California : Stanford University Press.

(1964) Current Issues in Linguistic Theory. The Hague : Mouton & Co. (A revised version of the paper "The Logical Basis of Linguistic Theory" in H. Lunt (Ed.), Proceedings of the Ninth International Congress of Linguists, pp. 914 - 978. Discussion of the paper, pp. 978 - 1008.)

(1965) Aspects of the Theory of Syntax. Cambridge, Mass : MIT Press.

(1966) Topics in the Theory of Generative Grammar. The Hague : Mouton & Co.

Chomsky, N. and G.A. Miller.

(1963) "Introduction to the Formal Analysis of Natural Languages." In R.D. Luce, R. Bush and E. Galanter (Eds.), Handbook of Mathematical Psychology, Vol. II , pp. 269 - 322. New York : John Wiley & Sons, Inc.

Corré, A.D.

(1962) The Structure of Tamil. Ph.D. Thesis, University of Pennsylvania. (Unpublished.)

d'Souza, A.T.A.

(1960) "The Changing Place of English in the Educational System of Ceylon." In J. Sledd (Ed.), A Report of the Conference of Teachers of English Held at the University of Ceylon, Peradeniya, January 3 - 8, 1960. (Unpublished.)

de Saussure, F.

(1959) Course in General Linguistics. (Eds. C. Bally and A. Sechehaye in collaboration with A. Reidlinger.) Translated by W. Baskin. London : Peter Owen Ltd., 1960.

Fillmore, C.J.

(1963) "The Position of Embedding Transformations in a Grammar." Word, 19, pp. 208 - 231.

Fodor, J.A. and J.J. Katz (Eds.).

(1964) The Structure of Language: Readings in the Philosophy of Language. Englewood Cliffs, New Jersey : Prentice-Hall, Inc.

Halle, M.

(1961) "On the Role of Simplicity in Linguistic Descriptions." In R. Jakobson (Ed.), Structure of Language and Its Mathematical Aspects, Proceedings of the Twelfth Symposium in Applied Mathematics, pp. 84 - 94. Providence R.I. : American Mathematical Society.

Hill, A.A.

(1961) "Grammaticality." Word, 17, pp. 1 - 10.

Hockett, C.F.

(1957) "Two Models of Grammatical Description." Word, 10, pp. 210 - 234.

Householder, F.W. (Jr.).

(1959) "On Linguistic Primes." Word, 15, pp. 231 - 239.

Ilakkuvanar, S.

(1961) Tamil Language. Madras : Appar Achakam.

Kandiah, T.

(1965) "The Teaching of English in Ceylon: Some Problems in Contrastive Statement." Language Learning, 15, pp. 147 - 166.

Katz, J.J. and J.A. Fodor.

(1963) "The Structure of a Semantic Theory." Language, 39, pp. 170 - 210. Reprinted in Fodor and Katz (1964).

Katz, J.J. and P.M. Postal.

(1964) An Integrated Theory of Linguistic Descriptions. Cambridge, Mass : MIT Press.

Lees, R.B.

(1957) Review of Chomsky(1957b). Language, 33, pp. 375 - 408.

(1960a) "A Multiply Ambiguous Adjectival Construction in English." Language, 36, pp. 207 - 221.

(1960b) "Some Neglected Aspects of Parsing." Language Learning, II, pp. 171 - 181.

(1960c) The Grammar of English Nominalizations. (Third Printing.) The Hague : Mouton & Co., 1964.

(1963) "Analysis of the 'Cleft-sentence' in English." Zeitschrift fur Phonetik Sprachwissenschaft und Kommunikationsforschung 16, pp. 371 - 388.

(1965) "Two Views of Linguistic Research." Linguistics, II, pp. 21 - 29.

Lyons, J.L.

(1958) Review of Chomsky (1957b). Litera,5, pp. 109 - 115.

Matthews,P.H.

(1961) "Transformational Grammar." (Review Article) Archivum Linguisticum,13, pp. 196 - 209.

Meile, P.

(1945) An Introduction to Tamil. Paris : Librairie Orientale et Americaine.

Pillai, S.A.

(1963) A Generative Grammar of Tamil. Ph.D Thesis, University of Indiana. (Unpublished.)

Pope, G.U.

(1859) A Larger Grammar of the Tamil Language in Both its Dialects. (Second Edition.) Madras : The American Mission Press.

(1911) A Handbook of the Ordinary Dialect of the Tamil Language. (Seventh Edition) Oxford : Clarendon Press.

Postal, P.M.

(1964a) Constituent Structure: A Study of Contemporary Models of Syntactic Description. The Hague : Mouton & Co.

(1964b) "Limitations of Phrase Structure Grammars." In Fodor and Katz(1964), pp. 137 - 151.

Robins, R.H.

(1959) "In Defence of WP." Transactions of the Philological Society, pp. 116 - 144.

Schacter, P.

(1964) "Kernel and Non-Kernel Sentences in Transformational Grammar." In H. Lunt (Ed.), Proceedings of the Ninth International Congress of Linguists. The Hague : Mouton & Co.

Siinivasan, R.

(1960) Moliiyal. Madras : Caxton Press.

Smith, C.S.

(1961) "A Class of Complex Modifiers in English." Language, 37, pp. 342 - 365.

Subbiah, R.

(1965) A Syntactic Study of Spoken Tamil. Ph.D. Thesis, University of London. (Unpublished.)

Subrahmanya Sastri, P.S.

(1934) History of Grammatical Theories in Tamil and Their Relation to the Grammatical Literature in Sanskrit. Mylapore, Madras : The Madras Law Journal Press.

Subrahmanya Sastri, P.S. (Commentator)

(1930) Tolkāppiyam : The Earliest Extant Tamil Grammar, Vol. I. (With a short commentary in English.) Mylapore, Madras : The Madras Law Journal Press.

(1945) Tolkāppiyam - Collatikaram, (With an English commentary.) Annamalai University Tamil Series No. 9 (Gen.Ed. T.M. Minakshisunderam). Annamalai Nagar : Annamalai University.

Teeter, K.V.

(1964) "Descriptive Linguistics in America: Triviality vs Irrelevance." Word,20, pp. 197 - 206.

Thananjeyarajasingham, S.

(1961) Some Tamil Documents of the Dutch Period in Ceylon : The Language of the Tamil Dutch Documents (Eighteenth Century). Master of Letters Thesis, Annamalai University. (Unpublished.)

Varatharajan, M.

(1947) Molinul. Madras : Appar Achakam.

Wells, R.S.

(1947) "Immediate Constituents." Language,23, pp. 81 - 117.

Zvelebil, K.

(1962) "How to Handle the Structure of Tamil." Archiv Orientalni, 30, pp. 116 - 142.

(1963) "A Few Notes on Colloquial Tamil." Tamil Culture , X , pp. 36 - 47.

(1964) "Tamil in Synchrony and Diachrony." Tamil Culture, XI, pp. 339 - 352.

(1965) "Towards a Taxonomic and Generative Grammar of Tamil." Archiv Orientalni, 33, pp. 602 - 613.